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CLINICAL OBSERVATIONS ON THE PRACTICE OF BLEEDING IN THE COLD STAGE OF INTERMITTENT FEVER.

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Since the publication of Dr. Mackintosh's papers on intermittent, I have had a strong desire to put to the test of experience the utility of the practice of bleeding in the cold stage of ague. Soon after the first appearance of these deservedly celebrated dissertations, my colleague, Dr. Graves, bled in the cold stage with good effect in a few cases, for the first time, I believe, in this country. From having witnessed these cases, I confess I became an advocate for the practice, and the success which followed my own trials at this time confirmed me in my favourable opinion of it. But still our cases were too few, and I was not wholly satisfied as to the constant utility of the new method of treatment. An opportunity offered for investigating the question in the spring of the present year.

As the epidemic of continued fever which has lately visited Dublin declined, cases of intermittent became frequent. In various situations about Dublin, particularly on the northern side, ague raged with an unknown severity. In Swords, a village seven miles to the north of Dublin, and in the vicinity of the sea, it was during the spring and summer completely endemic. In various situations in its neighbourhood, particularly those in the vicinity of salt marshes, numbers of individuals became affected with the disease. Many of the afflicted were received into the wards of the Meath Hospital, where I began to investigate the utility of the new practice on an extensive scale. Anxious to know its effect, I treated the patients at first only by bleeding in the cold stage, and the use of saline purgatives when necessary, but soon found that without the use of bark I could not succeed in eradicating the disease. Further, I observed that cases occurred where the practice was obviously followed by effects for which I was not prepared. I then determined to try cautiously in each case the effect of bleeding, and, if I found that the patient was not advancing towards recovery, to resort at once to the use of bark.

The quantity of blood drawn in each instance averaged at fourteen ounces, and the operation was never performed until the rigour was well established. In most instances the patients were bled only once, but in some the operation was repeated more than twice.

In the following paper I give an impartial account of the result of my practice, leaving the reader to draw his own conclusions.

The local symptoms which occurred in the cases under my observation may be divided into two classes. *First*, those which occurred during the paroxysm. *Second*, those which continued during the intermission, but which were aggravated in the paroxysm, and were generally most severe in the cold stage. Among the first, the principal were, severe pain in the loins, great headach, violent cough, sensation of oppression, and soreness in the præcordial region, dyspnœa, accelerated and small pulse, nausea, epigastric tenderness, bilious vomiting. In the second class we may place cough with mucous expectoration, in a few cases headach, and in several hepatic and splenic enlargement.

Effect on the rigour.—A very common effect of venesection was to produce at first a momentary suspension of the rigour. This may be attributed to mental emotion. In some cases where the patient heard the order given for bleeding on the following day, the rigour did not appear. As soon as an ounce or two of blood had been drawn, the rigour used to re-appear, and continue until about twelve ounces were obtained; it then ceased, but frequently re-appeared as soon as the arm was tied up; and having continued for about five or ten minutes in a diminished degree, was gradually succeeded by the hot stage. In one instance a distinct interval occurred between the cessation of the rigour and the commencement of the hot stage.

In other cases the intensity only of the rigour was diminished, while its duration remained the same; while in some the only effect observed was the relief of the most violent local symptoms, such as the cough and headach. In a few instances the stages of the paroxysm appeared to be lengthened

by the operation, which was the contrary of what we expected, while in others it appeared to have no perceptible effect on the rigour. In one case the rigour disappeared on the fourth pyrexial day after the bleeding, but the symptoms indicative of local congestion occurred at the usual time.

The effects, then, of venesection during the rigour were,—checking the rigour altogether; momentary suspension of the rigour; checking the rigour, after a certain quantity of blood was drawn; its return in a mild degree; diminution of its intensity, but not of its length; relief of the local symptoms alone; prolongation of the rigour without diminution of intensity; no apparent effect; disappearance of the rigour on the fourth pyrexial day after the operation, but persistence of the symptoms indicative of internal congestion.

Of these the third effect was by far the most common. The diminution of intensity, but not of length, was next in frequency. The other results were rare. In three instances *no apparent effect* was produced by the operation either on the intensity or duration of the rigour. In two it was prolonged without diminution of intensity. In one only did I observe the relief of the local symptoms alone. As to the cutting short of the rigour, I can only say that I have very seldom seen it. During the presence of the late epidemic, we had a few instances of it; but since I began to take the cases under my more particular observation, I have seen but four examples in which this remarkable effect was produced. The last of these effects was observed in one case only. The patient was admitted presenting symptoms of continued fever passing into intermittent. He experienced his first rigour on the day after his admission, or the fourth of his illness. The different stages of the paroxysm were very well marked. During the interval between this paroxysm and the succeeding one, which occurred two hours later on the following day, he remained in a state of some febrile excitement. Pulse 96; tonge furred; skin rather hot. He made no complaint, and appeared in excellent spirits. He was bled on the sixth day of his illness, and second of the appearance of the intermittent. The rigour was not checked, but shortened; the hot stage increased in length and severity; and the blood was sizy. The succeeding paroxysms were milder; but on the ninth day of his fever, and fifth of the intermittent, he became affected at the usual time with all the symptoms which used to occur in the rigour. He had cough, difficulty of breathing, oppression at the præcordia, nausea and headach. He had *no rigour* or lumbar pains. These symptoms continued for an hour, when he became very hot, and in this state continued until evening, when sweating came on. On the next day, however, the usual paroxysm recurred, and the disease continuing, he was ordered quinine, under the use of which the rigours speedily ceased, but his convalescence was extremely slow.

Effect on the hot and sweating stages.—In general, when the venesection in the cold stage had succeeded in checking the rigour, we found that the subsequent stages of the paroxysm were rendered milder. I have often observed that the hot fit was not at all well marked. Soon after the arm was tied up there used to appear a gentle warmth, which was imperceptibly succeeded by diaphoresis. I have seen this warmth and moisture of the surface come on even when a slight degree of rigour continued. But in other instances we found that a well marked and often severe hot fit succeeded the operation;—that this might continue even for a longer period than usual, and be characterized by a more than usual degree of intensity;—such a hot fit might be succeeded in some instances by a long-continued sweating stage, or, what was frequently the case, the hot fit would subside, and the patient had either no sweating stage that day, or did not perspire until night.

The effects of bleeding in the cold fit upon the subsequent stages were,—the hot stage being rendered milder; hot stage not distinct; sweating rapidly succeeding; increased severity of the hot fit; increased length of the hot fit; sweating stage rendered milder; non-appearance of the sweating stage; increased length and severity of the sweating stage; non-appearance of either hot or sweating stage: no apparent effect on either stage.

As to the comparative frequency of these very different effects, I may remark, that those cases in which the hot and sweating stages were rendered milder were the rarest. The most frequent of the above results was the last, namely, that no apparent effect was produced on the hot and sweating stages. The remaining effects occurred in a nearly equal proportion. In one case only did we observe that the rigour was not followed by the hot and sweating stages; and in three the hot stage appeared without the sweating. In one case only we observed a complete subsidence of febrile action to follow the bleeding. This apyrexial state continued for nearly an hour, during which the patient expressed himself at ease; his skin was cool, and all symptoms of fever had disappeared. The hot stage then came on, and was followed by sweating. I must here remark, that we did not observe any particular characters of the fever, any remarkable local symptom, nor any thing peculiar in the habits and idiosyncrasies of the patients, which could lead to an explanation of the discrepancies in the results above related.

Effect on Local Symptoms.—It was upon the local symptoms indicative of internal congestion, which occur with so much severity during the cold stage, that the best effects were produced by the detraction of blood at this period. One of the most constant of these was the pain in the lumbar regions, accompanied by great tenderness in these parts. These symptoms invariably yielded with great rapidity; and often before the operation was finished they totally disappeared.

The cough, dispnœa, and oppression about the præcordia, were next in frequency.

These, apparently indicative of a congested state of the lung, were speedily removed by venesection in the cold stage. A number of the patients who were thus affected laboured under a continued *bronchitis*, as indicated by cough and mucous expectoration during the intermission—the stethoscope also showing that mucous inflammation existed. Such patients suffered extremely during the cold stage from difficulty of breathing, and experienced great and sudden relief from the bleeding.

In one patient, on applying the stethoscope during the cold stage, I heard the sonorous râle with a degree of intensity which surprised me. Every portion of the lungs was thus affected. This man was bled in the cold stage, which checked the rigour for the time; and upon examining him again in the course of ten minutes, when the sweating stage was setting in, I found the respiratory murmur perfectly pure.

That diseases of the lungs should be a common consequence of intermittent is not to be wondered at, when we consider that this organ, one of the most delicate and extensive in the body, is at the same time supplied with the greatest quantity of blood. During the cold stage it is often severely congested, and, if not relieved by the detraction of blood, we cannot be surprised to find inflammation set up in it. How, I would ask, does the congestion in the cold stage of ague differ from that of pneumonia in the first degree? Some would answer that in the one case the congestion is passive, in the other active. But these are merely terms to which we cannot attach any definite idea; and if, for the sake of argument, we allow the difference, is it not highly probable upon the commencement of the hot stage, that the excited arterial action will produce inflammation of the pulmonary tissue? The condition of parts in both cases is very similar. In common pneumonia, the first symptom is often a severe rigour, followed by a hot stage, in which the inflammatory symptoms manifest themselves.

The effect of the bleeding on the state of the pulse was various. In general we found that during the rigour the pulse was quick and small, and in some instances irregular. In several cases a tendency to syncope was produced, accompanied with sinking of the pulse, but not its total extinction. This happened, however, in one instance. In another the pulse, which during the rigour was quick and irregular, was not affected as to its frequency, but became more regular. I regret that our observations on this subject were not more minute and general; but I think that the effect in the majority of cases was to diminish the frequency and irregularity of the pulse, and to increase its fulness. It is extremely difficult to ascertain the exact state of the pulse during the rigour from obvious reasons, and on this account our observations were in many instances very defective.

The nausea during the cold stage was a pretty general occurrence, and in a considerable number of cases used to terminate in copious bilious vomiting toward the close of the rigour. It was generally accompanied with tenderness of the epigastrium, and in some cases of the hypochondria, and even the whole abdomen. This tenderness was often extremely severe; in most cases it was removed by the venesection, and with it the nausea used also to disappear.

That this tenderness and nausea depend on the congested state of the stomach, liver, and spleen, is generally admitted; that this congestion often repeated will terminate in actual disease, cannot be denied. We observe this in almost every case of long-continued ague; and must conclude, that, although the patient experiences copious sweating during the time of reaction, still these alone are not sufficient to relieve the internal viscera, which thus become more and more diseased; something appears requisite to assist nature; and the bleeding in the cold stage seems to answer this indication on theoretical grounds, and, as we have seen, its utility is demonstrated by practical experience. As to the application of the remedy in question to the relief of the second class of symptoms, I regret that a sufficient number of observations has not been made to enable me to form any general conclusions. The cough and mucous expectoration were in most cases indicative of an inflammatory affection of the bronchial mucous membrane, and in some were connected with partial pneumonia. In the majority of cases, we had to direct our attention particularly to the cure of these diseases by the means usually employed; but in a few instances the pneumonia was certainly checked, if not wholly relieved, by the bleeding in the cold stage. I cannot say that I have observed this with respect to the *bronchitis*, which continued in those cases where the inflammation of the pulmonary tissue had been apparently checked.

As the great majority of the cases treated in the Meath Hospital were not of long standing, we found but few instances of splenic and hepatic enlargement. The cases in which these lesions occurred were of two kinds;—those in which the visceral enlargement was the consequence of long-continued intermittent, or of repeated attacks of the disease; and those in which it appeared as the consequence of a single attack, not lasting longer than four weeks.

Of the first of these cases we had but few examples. In one instance, where the patient had suffered several relapses, and in whom the spleen was so enormously enlarged as to reach almost to the crest of the left ilium, no effect whatever was produced, while in another the bleeding was followed by rapid diminution of the splenic tumour. The case is so remarkable that I mention its particulars.—An old man of an extremely cachectic appearance, and labouring under tertian ague of long standing, was admitted into the Meath Hospital in the beginning of the year 1827. He was dropsical, had diarrhœa and *bronchitis*, and presented a great enlargement of the

spleen. From the debilitated state of this patient, I at first determined to try the effect of bark alone, and accordingly ordered two grains of the sulphate of quinine to be administered three times a-day. Upon this treatment he was continued for upwards of a week, but the disease did not appear to yield in the least. I then ordered a small bleeding in the cold stage, which was followed by the best effects. The strength of the patient during the intermission appeared improved, and the ensuing paroxysm was much less severe than usual. Encouraged by the practice, I repeated the venesection. From this time the paroxysm ceased, the patient rapidly recovered, and in the course of little more than a fortnight the splenic tumour had wholly disappeared.

This is not the only symptom in which a splenic tumour of long standing appeared to yield to the practice. The case of Donnellan is another instance of the same effect. I have often seen that attacks of intermittent were apparently cured by the exhibition of bark alone; but that in many cases the splenic tumour remained without any perceptible diminution. Such patients are very liable to relapse. If the diminution and ultimate removal of the splenic enlargement be found to frequently follow the practice of bleeding in the cold stage, it will form a powerful argument in its favour.

The effect just mentioned probably arises from the following causes:—*first*, the checking of the rigours, during which the spleen suffers enlargement; and, *secondly*, the direct depletion of the organ.

The latter mode may operate either by relieving the congested state of the spleen; by exciting the absorbent system; or by removing inflammatory action in the organ itself, which would tend to its hypertrophy, and to the continuance of the disease.

In the cases of the second order, namely, those in which the splenic tumour was formed during a single attack, not of greater duration than four weeks; the tumefaction rapidly subsided even in cases where the bleeding did not altogether remove the intermittent. To this observation, however, the case of Cath. Keogh forms an exception. In most of the cases of splenic tumour there was also evidence of enlargement of the liver, apparently from congestion. That this organ may be greatly enlarged by venous congestion is often seen in cases of disease of the right side of the heart. (Andral, *Clinique Medicale.*) When this state of the liver occurs in a slight degree, its detection is difficult; but in every instance where we observed it, its subsidence appeared to proceed *pari passu* with that of the spleen.

Having now described the effect of the practice on the paroxysms and on the local symptoms, I must next mention some very untoward circumstances which appeared to follow the bleeding in the cold stage. These were *the occurrence of new local inflammatory symptoms*, and the *supervention of a low irritative fever*.

The inflammatory affections observed were *gastritis; tonsillitis;* inflammation of the submaxillary gland; and *pneumonia.* Of these the first occurred in several instances, and was often severe. In those cases where it did occur, the intermittent was not checked by the bleeding in the cold stage. In the first case in which we observed it, namely, that of Conway, the intermittent was of three weeks' standing, and had been treated by two bleedings in the cold stage, which had no effect whatever in checking the disease. The patient became affected with violent symptoms of *gastritis*, which yielded to the application of a large number of leeches to the epigastrium. In the second case, that of Thechan, the intermittent was of thirteen days' standing of the tertian type. The patient was bled in the cold stage on the eleventh day, and upon the thirteenth day the symptoms of *gastritis* appeared. The rigour on this day was very trifling. The third instance of the supervention of gastric inflammation occurred in the case of Cath. Keogh, after she had been nearly four weeks labouring under quotidian fever. She was twice bled, and the intermittent, so far from being diminished, appeared increased in violence. The symptoms of *gastritis* supervened three days after the second bleeding.

These were the most remarkable instances of the occurrence of *gastritis* after bleeding in the cold stage. We observed it in other cases, but not with such well marked characters. To account for this result is difficult; but when we recollect the apparent connexion that exists between the gastric and intermittent forms of fever, we may suppose that on the interruption of the usual course of the intermittent by the bleeding, the disease in the system, *whatever that may be*, then settles on the organ most liable to be affected during the precursory fever of intermittent.

Were we to admit the doctrine of *depuratory fevers*, we might suppose that a certain morbific cause existed in the system, and that by the repeated paroxysms it was at length got rid of. Now, if such be the fact, it is plain that to interrupt an intermittent suddenly would favour the formation of other disease. On this point I shall quote from Frank.

"The name of depuratory fever is not a word devoid of meaning. Many cachexiæ, glandular engorgements, want of activity in the absorbent system, and a disposition to phthisis, diminish under the influence of a fever, which, by the different emunctories, expels the latent acrimony in the system."

In opposition to this view, it might be urged that in the cases where this gastric inflammation appears the intermittent is not interrupted. That it was not checked is certain; but still we may conceive, from the effect of the practice in other cases, that an impression of some kind was made upon it. Indeed, in the second case we observe that the gastric symptoms appeared on the next pyrexial day following that on which the bleeding was

performed, and that on this day the rigour was very trifling. Here, then, we see an impression made on the intermittent, and at the same time the occurrence of gastric inflammation.

On this subject it is plain that nothing but conjecture can be offered. One conclusion, however, may be drawn, namely, that we must not be too sanguine in substituting the detraction of blood for the slower operation of nature. If it is proved by future experience that such effects often follow the practice, it will form a weighty argument against it.

In the case of Donnellan, the recurrence of the daily paroxysms were cut short by one bleeding, which was performed on the 8th of March. On the 10th, symptoms of inflammation of the submaxillary gland supervened. This terminated in abscess, which burst on the 13th; and on the 16th, the intermittent again made its appearance. On the 20th, he was again bled in the cold stage, which checked the disease a second time, and this was followed in a few days by severe *tonsillitis*.

I have next to mention a case where the patient died with symptoms of *pneumonia* and softening of the brain. This was the only instance where death occurred after the bleeding in the cold stage in our wards.

John Casey, aged 40, a labourer, was admitted on the 18th of July, suffering under a severe quotidian fever of four days' standing, which was preceded by symptoms of continued fever for a week. He complained of severe cough, which affected him during the apyrexial state, and in the rigour. On the following day he was bled to sixteen ounces in the rigour, the effect of which appeared to be a great increase of the severity of the paroxysm. The rigour continued for an hour after the operation, the hot stage for half an hour, and the sweating for three hours. Next day, however, the rigour did not appear; his pulse was regular; the cough trifling; and his appetite had returned. The disease appeared to be cut short completely.

On the 22d, he complained of cough at night, accompanied by sweating; his tongue was whitish. By percussion and the stethoscope no disease of the lungs could be detected.

24th.—Great debility since yesterday; pulse 88, soft, full, and vibrating; tongue white; perspired copiously this morning,—*Capiat Sulph. Quininæ gr. decem.*

25th.—Cough severe; other symptoms as yesterday; respiratory murmur in postero-inferior portion of right lung marked by the crepitating *râle.*

Omittatur Quinina. Venesectio ad uncias duodecim. Tart. Antim. semigranum omni hora. Hirud. duodecim lateri dextro.

26th.—Much relieved; has not coughed since the bleeding; *crepitus* greatly diminished, with return of the respiratory murmur.—*Vesicat. lateri.*

28th.—Dejection and great debility; extreme unwillingness to move or answer questions; tongue clean at the edges, furred in the centre.—*Extract. Hyoscyami grana sex.*—Beef Tea.

29th.—Considerably better; pulse 72; tongue clean.

30th July.—Same state as on the 28th. From this day he gradually became worse; the feet swelled; his cough returned with severity; his respiration was hurried; abdomen tympanitic. He became nearly insensible on the 5th of August; his eyes were fixed; skin cold and clammy; pulse small and weak. He frequently was observed to place his hand on the right side of his head. On the following day he was found paralytic in the left upper and lower extremities. He still, however, retained a slight power of motion; lower extremity much swollen; temperature diminished; speech inarticulate; respiration high and hurried; right sterno-mastoid acting strongly, left apparently paralyzed; no difference in the pupils, but the sight of the left eye appeared lost. He died on the 8th.

Dissection thirty-six hours after death.—But little emaciation; skin of a dirty yellow tint; œdema of left lower extremity continues; no appearance of putrefaction.

Head.—No increased quantity of blood on raising skull-cap; *dura mater* healthy; some serous effusion in arachnoid; *pia mater* vascular. The substance of brain in left hemisphere perfectly healthy: no effusion in ventricles; optic *thalamus* and *corpus striatum* healthy. Extensive *ramollissement* of the right hemisphere, the two anterior thirds of which are converted into a substance of the consistence of thick cream, and of a dirty grayish colour. The convolutions were not destroyed on the surface of the brain, but the alteration commenced at about a quarter of an inch below the arachnoid, engaging the *corpus striatum* and subjacent cerebral substance. Optic thalamus healthy; no disease in the *cerebellum*, *pons varolii*, or *medulla oblongata.*

Thorax.—About a quart of serum on each side of the chest; lungs collapsed. Right lung, superior lobe completely solidified When cut into, its substance soft, friable, and of an ash gray colour; when broken down, a quantity of fluid of the same colour and consistence of cream exuded; no trace of tubercles; middle lobe perfectly healthy; posterior portion of the inferior lobe solid, firm, and red. Left lung, posteriorly, greatly engorged with venous blood; anteriorly, œdematous; trachea filled with red frothy fluid; its mucous membrane vascular in the intercartilaginous spaces. Heart enlarged; upwards of a pint of serum in the *pericardium;* left ventricle considerably enlarged, its capacity increased; left auricle dilated; no disease of the valves.

Abdomen.—Peritonæum healthy; some reddish serum in pelvic cavity; liver hardened, universally mamillated; its concave surface presenting a black colour, affecting the hepatic substance to the depth of a quarter of an inch, and extending from the edge two and a half inches upwards. Omentum of a black

colour. This appearance is produced by the existence of small solid bodies between its layers; these are larger than the head of a pin, and resemble dried ink. Spleen hard and black on its concave surface, but becoming soft and red towards the convex; some red spots in the large end of the stomach, the mucous membrane of which is thickened and soft. *Duodenum*, *jejunum*, and *ileum* healthy; mucous membrane of colon thinned and softened.

This case I look upon as one of extreme importance. We here see a patient of strong habit affected with quotidian fever, which certainly appeared to have more than usual severity. He was but a week ill when admitted into the hospital. Bleeding in the cold stage was performed on the twelfth day of his illness, and sixth from the date when his fever assumed the intermittent form. The paroxysms appeared to be exasperated; but on the following day the rigour did not return, and all the symptoms appeared to have vanished. On the 21st or following day, he also remained free from fever, but on the 24th, obscure symptoms made their appearance. He had some cough at night, and was extremely weak and somewhat feverish. At this period a dose of quinine was administered, under the impression that the intermittent was about to return. On the 25th, symptoms of pneumonia manifested themselves, which yielded in some degree to treatment, but soon returned, and were complicated with a new train of phenomena indicative of disease of the brain, under which he speedily sunk.

This, then, is another instance of extensive inflammation of one of the most important organs of the body coming on without any external exciting cause, in a patient in whom the intermittent had been cut short by venesection. The softened state of the brain was, in my mind, produced also in this man by a process analogous to inflammatory action. The symptoms indicative of it came on while the patient was labouring under great febrile disturbance.

In this case it is to be remarked, that during the intermittent the organ chiefly affected was the lung; accordingly, we found that on the interruption of the fever this was the first *viscus* to suffer.

In several cases in which no local inflammations appeared, the patients fell into a state of great nervous debility, accompanied with a species of low fever. This state was characterized by a soft and quick and sometimes full pulse; palpitation of the heart, increased pulsation of the arteries, which in one case presented the *bruit de soufflet* strongly marked; heat of skin somewhat increased; slight perspirations; countenance of a yellowish hue and sunken appearance; costiveness; unwillingness to move; dejection of spirits; anorexia. Whenever patients fell into this state, their convalescence was exceedingly tedious, and it was with great difficulty and the cautious use of the tonic plan that their ultimate recovery was effected. In the case in which the *bruit de soufflet* occurred, the greatest advantage was obtained by the application of a blister over the heart.

Effect of the Practice on the Type of the Intermittent.—In four instances we observed that the type of the fever was altered immediately after the bleeding in the cold stage. These were the cases of Molloy, Mechan, Madden, and Purcell. In others certainly a continued fever supervened, but this was either connected with the occurrence of internal inflammation, or was that low nervous fever which I have just noticed. In both these cases the change in general did not follow immediately on the bleeding.

In the case of Molloy, the disease was changed from tertian to quotidian; in that of Purcell, from tertian to quotidian, and afterwards double quotidian, with exacerbation of all the symptoms. In the case of Madden the tertian was checked, but after some time a tendency to relapse was manifested, the disease assuming the quotidian form. In Mechan's case, which was well marked tertian, it will be seen by reference to the table, that, on the day following that on which he was bled, and on which, if the type of the fever had not been altered, he should have been apyrexial, he was affected with symptoms of continued gastric fever. In this instance, however, as the continued fever followed the bleeding so immediately, and was accompanied by symptoms of gastritis, it is possible that it was only symptomatic of the latter affection.—(*See Table.*)

In all these instances it will be seen that when the type of the fever was altered, after the bleeding in the cold stage, it was changed either to continued fever or to a form in which the paroxysms were more frequent than in the original type. This I have observed in other instances, of which I did not keep accurate records. From what I have seen I am disposed to conclude that bleeding in the cold stage, when it does alter the type of intermittent, has a tendency to convert tertian into quotidian, and quotidian into remittent or continued fever. I never saw any example of the converse, or in which quotidian was converted into tertian.

In the following table are arranged, in a greatly abridged form, those cases in which bleeding in the cold stage was performed, and of which accurate records were kept. Many other instances in which this practice was used occurred in our wards, but of these I have not such accurate reports as would justify my drawing from them any particular conclusions.

1. Cor. Donelan, ætat. 20, 5 months ill, March 6, 1828. *Type, &c.* Quotidian; enlarged spleen. *Treatment*, two bleedings.

Rigour not checked by first bleeding, but the paroxysms ceased to recur; inflammation of submaxillary gland; its suppuration; return of intermittent; its disappearance after second bleeding; reduction of splenic tumour; *tonsillitis.*

2. John Muldoon, ætat. 20, 17 days ill,

May 24, 1828. *Type, &c.* Quotidian. *Treatment,* two bleedings.

Was bled on the day of admission; rigour shortened and rendered less severe; continuance of the disease, but in a much milder form; second bleeding on the 21st day of his illness followed by cessation of paroxysms and rapid recovery.

3. Charles Molloy, ætat. 36, 7 weeks ill, March 8, 1828. *Type, &c.* Tertian. *Treatment,* two bleedings.

Was bled on the 20th of March; rigour checked, but returning after the arm was tied up; appearance of hot without the sweating stage; conversion of the disease into quotidian. Second bleeding; he left the hospital unrelieved.

4. Laurence Breen, ætat. 63, 5 days ill, May 26, 1828. *Type, &c.* Tertian. A case of relapse complicated with pneumonia. *Treatment,* two bleedings.

First bleeding performed on the 29th of May. Cessation of intermittent and disappearance of pneumonia; ophthalmia; return of intermittent in three weeks. Bleeding again performed; recovery after a paroxysm on the next pyrexial day.

5. Owen Tierney, ætat. 32, 7 days ill, March 4, 1828. *Type, &c.* Quotidian. *Treatment,* four bleedings; six grains of sulphate of quinine after second bleeding.

No alteration in the disease until after the fourth bleeding; cessation of disease; nervous debility; arterial excitement; slow convalescence.

6. Michael Kelly, ætat. 28, 8 weeks ill, May 12, 1828. *Type, &c.* Quotidian. *Treatment,* two bleedings; use of quinine.

Bleeding performed on the day of admission; rigour increased in length by three quarters of an hour, and not diminished in intensity; continuance of the disease, but in a milder form; exhibition of quinine in six-grain doses daily for four days. Rapid recovery.

7. John Madden, ætat. 70, 3 weeks ill, March 20, 1828. *Type, &c.* Tertian. *Treatment,* one bleeding; use of quinine and wine.

Bleeding performed on the twenty-second day of his illness; rigour checked; apyrexia for three weeks; tendency to relapse, the disease assuming the quotidian form; great debility; cure by the use of quinine and wine; convalescence slow.

8. Edward Brenan, ætat. 32, strong habit, 9 days ill, July 14, 1828. *Type, &c.* Tertian. *Treatment,* one bleeding; use of quinine.

Bleeding performed on the third day after admission; rigour checked; continuance of the fever, which assumed the quotidian form. Exhibition of quinine in ten-grain doses for eight days. Slow recovery.

9. John M'Cormick, ætat. 19, strong habit, 21 days ill, July 11, 1828. *Type, &c.* Tertian; paroxysms anticipating on each pyrexial day by an hour; congestion of liver and spleen. *Treatment,* one bleeding; use of quinine in ten-grain doses.

Was bled on the 16th July; rigour checked; apyrexia for three quarters of an hour, followed by the hot and sweating stage. On the succeeding pyrexial day the rigour returned, but he had neither the hot nor sweating stages. Use of quinine; cessation of paroxysms after first dose. Rapid recovery.

10. Patrick Kenna, ætat. 40, 10 days ill, June 3, 1828. *Type, &c.* Quotidian, with *bronchitis. Treatment,* two bleedings; use of quinine.

No apparent effect produced on the paroxysms or disease by either bleeding. Use of quinine in ten-grain doses daily. No return of intermittent after first dose; great debility, with cough and hæmoptysis; emaciation; spongy gums; slow convalescence.

11. Charles Doolan, ætat. 40, 25 days ill, June 4, 1828. *Type, &c.* Quotidian, with *bronchitis. Treatment,* one bleeding; use of quinine.

No effect produced on the disease. Quinine ordered on the 7th of June in ten-grain doses daily. Cured in four days.

12. Patrick Horan, ætat. 34, 4 days ill, June 5, 1828. *Type, &c.* Tertian, with motions of the limbs similar to *chorea. Treatment,* one bleeding; use of quinine.

No effect produced on the disease. Exhibition of quinine in ten-grain doses. Cured in four days.

13. William Ryan, ætat. 20, 8 weeks ill, March 27, 1828. *Type, &c.* Quotidian; great enlargement of spleen; congestion of liver; debility. *Treatment,* one bleeding; use of quinine in small doses.

Disease mitigated by the bleeding. Use of quinine on the 3d of April in two grain doses, continued three times a day. Very gradual recovery; splenic tumour scarcely diminished.

14. Thomas Conway, ætat. 20, 11 days ill, March 11, 1828. *Type, &c.* Tertian. *Treatment,* bled three times.

Relief of congestive symptoms from first bleeding; continuance of the paroxysms; second bleeding followed by symptoms of gastritis; third bleeding with relief of congestive symptoms as before, followed by the cessation of the paroxysms and apyrexia; great debility; slow convalescence under the use of quinine.

15. Cath. Keogh, ætat. 19, weak habit, 3 weeks ill, March 14, 1828. *Type, &c.* Quotidian; great splenic enlargement. *Treatment,* bled twice; leeches to epigastrium; use of quinine.

Was bled on the 15th and 16th of March, with relief of the congestive symptoms and shortening of the rigour. The disease increased in severity on the three following days. Symptoms of gastritis occurred on the 19th, which were relieved by copious leeching; but on the 22d the disease returned with great severity, and so continued till the 12th of April, although she took six grains of quinine daily in divided doses. From the 25th of March the persistence of the disease might be owing to the occurrence of slight venous inflammation which took place after the second day. She was dismissed on the 23d of April free from intermittent, but with

the splenic tumour remaining. In May she became again affected with severe ague.

16. William Collins, ætat. 38, May 16, 1828. *Type, &c.* Tertian; a relapse case; former attack occurred a month ago; treated by bark. *Bronchitis. Treatment,* bled once; use of quinine and tartar emetic.

The bleeding was performed on the second day of admission and fifth of his illness, with relief of congestive symptoms; rigour mitigated; subsequent stages as usual; persistence of the disease. Next rigour more violent; use of quinine in ten-grain doses; cessation of the paroxysms after first dose; exacerbation of *bronchitis;* use of tartar emetic; slow convalescence.

October 20. Health not yet re-established; he has had rheumatic pains and chilliness in the evening ever since.

17. James Abbott, ætat. 40, strong habit, 4 weeks ill, June 30, 1828. *Type, &c.* Quotidian for the last fortnight; at first tertian. *Treatment,* bled twice; use of quinine.

Bled on the first of July; rigour not checked, but he expressed relief; continuance of the disease; the paroxysms are much diminished in intensity; tumefaction of liver and spleen also diminished; bleeding repeated on the 5th; rigour checked for the time, but the disease continuing, he was ordered quinine on the 7th, after which day he had no return of the paroxysms. Discharged cured on the 16th.

18th. Martin Cleary, ætat. 26, 14 days ill, May 9, 1828. *Type, &c.* Quotidian. *Treatment,* bled twice; use of quinine.

Bled on the day of admission; rigour not checked nor diminished; continuance of the disease; second bleeding on the 18th day of his illness; no cessation of paroxysms; use of quinine in six grain doses daily; cessation of the disease after the second dose; very slow convalescence and imperfect recovery.

19. Luke Mechan, ætat. 18, 10 days ill, March 15, 1828. *Type, &c.* Tertian; well marked on admission, but at first irregular. *Treatment,* bled once; leeches to epigastrium; use of quinine.

Symptoms of gastric fever supervened on the thirteenth day, the bleeding having been performed on the twelfth; they yielded to leeching the epigastrium; slight return of the disease on the sixteenth day. Cure by quinine.

20. Dennis Purcell, ætat. 26, 11 days ill, April 3, 1828. *Type, &c.* Tertian. *Treatment,* bled twice; use of quinine.

First bleeding on the fourteenth day of his illness; paroxysm rendered milder; its return on the next pyrexial day; bleeding again performed; rigour not checked. On the following day the disease assumed the form of quotidian, and in two days that of double quotidian, with great increase of severity; exhibition of quinine in ten-grain doses; no return of disease after first dose. Cure under its use.

21. Patrick Hughes, ætat. 22, strong habit, six days ill, August 19, 1828. *Type, &c.* Quotidian; intermission not decided; paroxysms have appeared on the 20th. *Treatment,* bled once; leeches to epigastrium; use of quinine.

Bleeding performed on the 22d of August; subsequent paroxysms mitigated. On the 25th the symptoms of congestion came on at the usual period, not accompanied by rigour; but followed by the hot and sweating stages; rigours returned; splenic and hepatic enlargements are now observed; tenderness of epigastrium; exhibition of quinine on the 29th of August; no return of the paroxysms after second dose. Convalescence was extremely slow, with much gastric derangement.

22. John Casey, ætat. 40, 3 days ill, July 17, 1828. *Type, &c.* Quotidian; a precursory latent period of seven days' cough; no evidence of visceral enlargement. *Treatment,* bled once; ten grains of quinine; a second bleeding; use of tartar emetic.

Was bled on the 18th in the cold stage; all the stages of the paroxysm exasperated; apyrexia for the four following days; tendency to rigour on the 22d; great debility on the 24th; use of ten grains of quinine; supervention of pneumonia, which resisted bleeding and the use of tartar emetic; hemiplegia; insensibility. Death on the 8th of August.

From the examination of these cases, I apprehend that an impression will be received certainly against the indiscriminate or even frequent use of bleeding in the cold stage of ague. It may be remarked that in the great majority quinine had to be administered before the disease was eradicated; that many of them had an extremely slow and dangerous convalescence; that in several instances the disease, so far from being relieved, appeared exasperated by the practice; that local inflammatory affections occurred several times after the operation; and lastly, that the bleeding appears to leave a tendency to convert intermittent into continued fever. In one case, that of Casey, death from pneumonia and softening of the brain occurred. In none of my cases did any bad effect from sinking of the powers of life follow the practice immediately. But I am informed, that, in the practice of a highly respectable individual, there occurred two cases in which the patients did not recover from the collapse produced by bleeding in the cold stage. These facts should make us very careful how we interfere with nature by means of the lancet, in simple intermittent, when we have so certain, and, as far as I have seen, so infallible a remedy as the sulphate of quinine.

I do not deny that cases may often occur where venesection may be proper, such as intermittent complicated with severe internal inflammation; but shall only remark, as these cases have not come under my own immediate observation, to offer my opinion upon a purely practical point connected with them would be wholly useless. I shall conclude this paper by inserting extracts from two letters which I have received on the subject of bleeding in the cold stage of ague. I may mention that I have been informed by my friends, Drs. Townsend and Law of this city, that they have

given the practice a trial, and have found it to fail in the majority of cases.

The first letter that I shall quote is from Dr. Kelly of Castlerea in the west of Ireland.

"I have never in any instance, even where venesection did not prove salutary, known fatal disease of the brain to follow; nor have I ever known death to have taken place in *three hours* after the opening of a vein. I have not time to dwell longer on the subject now, as I have to answer your queries.

"*Query* 1st. What was the general effect on the cold stage?

"*Ans.* 1st. That of cutting short the rigour and rendering the hot stage generally milder.

"*Query* 2d. What was the effect on the hot and sweating stage?

"*Ans.* 2d. I have never tried venesection in the sweating stage, and but once in the hot, when I thought it proved injurious, by inducing great prostration of strength.

"*Query* 3d. What was the effect on the local symptoms, such as cough, pain, &c. &c.?

"*Ans.* 3d. It decidedly relieved pain of the head, which I have oftentimes known to be intolerable in the cold stage. It has relieved oppression, pain of the chest and side; but at the time of bleeding I could not observe any change as to cough; and whenever the patient laboured under cough, immediately after the bleeding I had recourse to blisters; therefore, cannot say which of the remedies was most useful in relieving it.

"*Query* 4th. What was the effect on the disease generally as to preventing the return of the paroxysm?

"*Ans.* 4th. It had generally the effect of rendering the paroxysm milder, and the disease more manageable by other remedies.

"*Query* 5th. Have you observed new local inflammation to follow the practice?

"*Ans.* 5th. I have observed new local inflammation, generally pulmonic, to occur after bleeding; but I never did imagine them to be the consequence of this practice. I rather attributed them to accidental causes.

"*Query* 6th. Have you treated any cases by blood-letting alone; and if so, with what result?

"*Ans.* 6th. I have never treated any cases by bleeding alone, nor do I think it safe or proper to do so.

"*Query* 7th. Have you observed any alteration in the type of the fever to follow?

"*Ans.* 7th. I have observed alterations frequently to occur in the type after this practice; but this I have observed as frequently in cases were bleeding was not tried, when we trusted merely to other remedies.

"*Query* 8th. Has disease of the brain followed the practice when the intermittent fever was cut short?

"*Ans.* 8th. I never knew disease of the brain to follow when the intermittent had been cut short.

"*Query* 9th. Do you think the practice most applicable in acute or in chronic cases?

"*Ans.* 9th. The practice is more generally and decidedly useful in acute cases, when the constitution has not been broken down. At the same time, I have sometimes seen bleeding useful in chronic cases also.

"*Query* 10th. What is the quantity of blood that you have generally drawn?

"*Ans.* 10th. I never exceeded twelve ounces in any case, but generally did not take more than from six to eight. I never repeated the bleeding a second time in the same case.

"*Query* 11th. Has the disease in any case been exasperated by the practice?

"*Ans.* 11th. The disease has appeared to me in some cases to have been exasperated by the practice."

The following is an extract from a letter for which I am indebted to my friend Mr. Gill, who has seen much intermittent in the fens of Lincolnshire.

Nottingham Park.

"Dear Sir—I feel very sorry that your letter should have anticipated my intention of writing you, as perhaps you may think I had forgotten my promise of so doing. But that was not the case. I was merely waiting to give you more fully the extent of my practice in intermittent fever. Without any more preface I shall answer your queries in order. 1st. 'How often have you employed the practice?' Thirteen times. 2d. 'What have you observed as to its effects in the various stages of the paroxysm?' I have bled five times before the usual time of the cold stage had arrived; in some one hour; others half an hour; another a quarter of an hour; and in one two hours before its usual time of appearance. The result was as follows:—In the first case, that of a strong healthy man, the cold stage occurred daily at 2 o'clock P.M., continuing about one hour, and followed regularly by the hot and sweating stages. I should mention he had never before been attacked with the ague, and it was only of three days' duration. I bled him largely *pleno rivo*, one hour before the expected paroxysm, viz. at 1 P. M. At ten minutes past 2, however, the shaking fit came on, but certainly not so violent in degree as the previous rigours. He complained less of the headach and sickness; and at a quarter to 3 this stage of the disease had disappeared, being fully a quarter of an hour of less duration than previously; but I am sorry to add, that the second stage was much more severe and protracted. The fever, headach, and restlessness most certainly were exaggerated, and an hour's longer continuance than before; and this hour seemed to me as if taken from the third or sweating stage, which was much more moderate than usual; but the patient did not feel that relief which he had done before in this stage of the paroxysm. I bled this man the next day at the same hour, and took away an equal quantity of blood. The cold stage came on in the same way as above described, and continued about the same time, but the fever was again more violent and of longer duration, and the sweating stage in the same proportion less. Notwithstanding these unfavourable symptoms, how-

ever, I determined the next day to continue the practice; but on my visit found the type of the fever completely altered; in fact, the man had all the usual symptoms of approaching typhus, viz. violent pain in the head, black fur upon the tongue, pulse quick, rather feeble, &c. Of course my treatment was altered; and by a liberal allowance of stimulants and tonics, with saline medicines, this man *fortunately* got well. I have given you fully the particulars of this case, as it is very important in its nature, and might have been of fatal termination.

"In the four other cases where I bled before the approach of the cold stage, I must candidly say, that, if I saw no *direct ill* arise, most certainly I saw no *immediate* good. Time alone can tell whether future ill effects may be averted by this plan of treatment. Again, I have bled five men during the shaking fit. I have observed in four of these that the fit was certainly *cut short*, in the other no perceptible alteration was visible. Bleeding appears to me certainly to have the power of cutting short the cold stage, but then by so doing it seemed to be the means of lengthening the febrile stage, and in almost all cases I found the sweating stage diminished in a ratio with the length of the febrile state. Besides, in all these five cases the fit made its appearance at the usual time. Some of these patients I have bled once, others twice during the continuance of the cold fit, and I feel morally certain, that if I had again and again bled them, typhoid symptoms would have been induced. If you wish further and more minute particulars of these cases, I shall be most happy to furnish you with them.

"I have practised venesection three times during the febrile state, where the pain in the head has been intense, I think with good effect. Perhaps, then, you will ask, what is my practical opinion of bleeding in the cold stage of ague? My opinion must certainly be qualified. In the fens of Lincolnshire all fevers partake more or less of the intermittent character; and experience teaches us, that, by what cause soever debility is induced, continued fever will be the effect. Whether this arises from any peculiar state of the atmosphere, or whether it is a natural consequence, I know not, though I am inclined to think the former. From this fact alone, if it can be proved that venesection during the cold stage produces debility, the practice must be exploded; besides, the present practice here is successful in ninety-five cases out of a hundred. By successful, I mean not only in curing the present symptoms, but in preventing future ill effects, such as enlargements of the spleen, liver, pectoral complaints, &c. Our practice is the following.

"On the first appearance of aguish symptoms, an emetic is exhibited, and the bowels are opened. We give the saline mixture in the febrile stage; and, as soon as the sweating stage is terminating, we administer every two hours two grains of the sulphate of quinine, with a liberal allowance of port wine. In the place of these, after the symptoms of intermittent have vanished, the patient is placed under an alterative plan of treatment, viz. pills of submuriate of mercury and bitters, which mode of treatment we find almost effectually to prevent organic diseases.

"Your third query, viz. 'Has it in many cases cut short the rigour?' I have already answered. Your 4th is, 'Have you observed new local inflammation to follow the practice?' Most certainly I have not. 5th. 'What has been its effects upon the local symptoms usually present?' I have generally found all patients during the shaking stage suffering from cough ' and difficulty of breathing. Bleeding undoubtedly relieves these symptoms, as well as the pains experienced in the splenic and hepatic regions; but when we consider that stethoscopic examination discovers no bronchial inflammation immediately after the cold stage has terminated, bleeding can never be recommended on that account.

"To the question, whether the type of the fever was altered? I have already adverted sufficiently. 6th, 'As to whether diseases of the brain followed?' I cannot give you any information from experience on that point. Upon the whole, from an impartial review of all the cases in which I have practised bleeding in the cold stage of ague, I should most certainly, as a moral practitioner, give my decided veto to the practice, conceiving it not only to be useless, but dangerous when *indiscriminately* followed,—I say indiscriminately, for cases might occur where I should think venesection might be necessary,—such as when a person suffering from pulmonary inflammation is attacked with aguish symptoms, &c. It is an anomaly which I cannot explain, that in Lincolnshire, where the atmosphere is perpetually moist, and where the mists and exhalations are excessive, cases of pulmonary consumption are very rare indeed. Would you not suppose that in persons predisposed to phthisis, these pulmonary congestions would act as an exciting cause?"*

From the London Medical Gazette.

ESSAYS ON SYPHILIS. By JOHN BACOT, lately Surgeon to the First Regiment of Guards.

(Continued from p. 303.)

GANGRENOUS ULCER.

I have now to describe some of the most formidable and distinctly marked varieties of syphilitic ulceration; and I shall commence

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* On the curious fact that in marshy districts, in which ague is frequent, pulmonary consumption is little known, Dr. Wells many years ago collected a great deal of evidence. But of these facts no general principle entitled to the character of an explanation has yet been discovered.—Transactions of a Society, &c. vol. iii.

with what I call the *gangrenous ulcer*, which I distinguish both from the sloughing and phagedenic sores. By the gangrenous ulcer, I mean that species of sore which is occasionally met with on the internal prepuce, or in the angle between it and the glans penis. It is easily recognised by the great inflammation and the excessive pain by which it is accompanied: it is attended also with a full, hard, and frequent pulse, much thirst, and all the general symptoms of fever. This ulcer, if left to itself, proceeds rapidly in its work of destruction: the prepuce and the glans are speedily destroyed by the rapidity of its progress, and it is not until perhaps a considerable portion of the penis has undergone the process of gangrene, that the fury of the complaint appears to have expended itself. This, however, seldom happens, because there are few who do not seek for assistance at an earlier period of the complaint; and, indeed, nature not unfrequently interposes for the security of the patient by the occurrence of an hemorrhage from some blood vessel of the part; in consequence of which the symptoms become suddenly mitigated, the dead parts are cast off, and a healthy surface presents itself. This is a form of disease in which the exhibition of mercury is attended with the most mischievous effects, and, perhaps, of all the medicines with which we are acquainted, it is the most to be avoided. The principle upon which this disease is to be treated is that of subduing inflammation: you will often find, upon inquiry, that this ulcer commences with a mere pustule, or pimple, as in other cases; but in the course of a few hours, or perhaps in a day or two, pain and tumefaction of the part ensue, a general feeling of restlessness, with alternate chills and flushes, come on, the appetite declines, and the sore extends by forming and casting off a succession of sloughs. It is not, as in common inflammation proceeding to gangrene, that a certain portion is doomed at once to destruction, and the line of demarcation is plainly apparent, but this extension of the sore shall continue for an indefinite period, until the disease appears to have, as it were, worn itself out. These sores generally afford a thin, acrid, ichorous discharge; and when they occur in those persons who have the prepuce long, they are much more troublesome, and, generally speaking, less manageable, than in the contrary condition of that part. Such is the character of the most aggravated form of the gangrenous ulcer, which, in its milder form, appears to me to be the same which some authors have called the phagedenic, others the sloughing, and others again the irritable chancre: and here I cannot but lament the want of precision in the language usually adopted in treating of these complaints. Since a mistake in the description of the sore necessarily leads to a misapplication of the means of cure, it is highly important to affix a distinct meaning to the terms we employ; for though language is defective, I fear it is not much more easy to delineate these various characters of disease, so as to avoid confusion. I beg, then, to repeat, that I restrict the term of the gangrenous syphilitic sore, or sores (for there may be more than one,) to that wherein the pain, redness, and tumefaction of the parts, is accompanied with general constitutional disturbance, wherein there is great thirst, loss of appetite, a rapid and full pulse, and the subjects most usually attacked being the young, florid, and robust; whereas the phagedenic ulcer, according to my construction of the term, is one in which the ulcerative process proceeds with rapidity, where an imperfect kind of cicatrization takes place at one extremity whilst the disease proceeds in another direction, and where the state of health is rather denoting an irritable than an inflamed condition; the pulse is frequent, but not indicative of strength, and all the animal functions are in a depressed and weakened state. This sore, in fact, is usually the consequence of a mal-administration of mercury, and is more prevalent in the female than in the male sex. I do not acknowledge it as the genuine and regular consequence of the action of the syphilitic poison, but believe that either an irritable constitution, or mismanaged and misapplied mercury, have given rise to the peculiar character of the ulceration, and thrown the disease out of its usual course.

The sore which I designate the sloughing ulcer is denoted by a great and remarkable degree of surrounding hardness; by a livid bluish colour; by its hollowness; by the sloughs being cast off in patches rather in depth than breadth; the health being undisturbed, and there being neither pain nor inflammation accompanying it. This last is the sore which Mr. Evans calls the ulcus induratum, I imagine, and which Mr. Carmichael has occasionally named the sloughing ulcer, as I have done; but he does not appear to restrict the term to this species only. You will find many authors asserting that such an ulcer is probably that described by Celsus, or by some other ancient writer: I shall not often allude to these distant authorities, because we have now to do with matters of fact, and if we do not at this time rightly comprehend the descriptions given by our contemporaries, it is not very likely that we can give any thing of practical advantage by endeavouring to trace a similitude between the ulcerations that we now are called upon to treat and those described by Hippocrates, Celsus, or other ancient writers.

But to return from this digression:—You will find authors asserting that the gangrenous ulcer is not followed by secondary affections; and in the majority of instances this is the case, though the rule admits of many exceptions; and in my own practice, I have more than once met with an eruption of papulæ, preceded by pains in the joints, come on even before the original sore was perfectly healed. These instances of secondary affection generally follow the less violent forms of this ulceration, for it is not always met with in the same degree of intensity; and it appears very

probable to me that, in the most severe cases, the poison is prevented from exerting its usual effects upon the constitution in consequence of the rapid destruction of the parts, and that therefore absorption does not in general take place. The same remark has been made by Mr. Pearson, when treating of the employment of cinchona in this species of ulceration, to which, however, I consider it to be entirely inapplicable; nor can we draw any favourable opinion of that medicine from the cases which he has related, since that can scarcely be lauded as a cure which implies the destruction of the whole penis. The disease, if left to itself, could indeed hardly have done more. The means of cure which I have always found to be the most successful, are those which have also been advocated by Mr. Rose and Mr. Carmichael, under similar circumstances. Blood should be freely abstracted, the bowels opened thoroughly, and the constitution put, as quickly as possible, under the depressing influence of the tartarized antimony, in divided doses. As a local application, I have found the poppy decoction, applied warm, the most soothing during the inflammatory stage, or a watery solution of opium. When the disease is checked, however, the balsams applied upon lint have appeared to me to hasten the exfoliation of the sloughs, aided by a warm poultice, in which the diseased parts should be wrapped. By the balsams I mean those of Peru or of Copaiba, or the compound tincture of benzoin. As soon as the pulse has felt the influence of the depletory measures employed, opium in liberal doses cannot be too soon administered. Under this plan of treatment the disease will usually be arrested in three or four days; sometimes, if the patient makes early application, there will be a chance of saving the glans—but under every circumstance of favourable and early treatment, the complaint, in its most violent form, is a very formidable and alarming one, and some degree of mutilation is unfortunately very difficult to prevent. When the gangrenous process is checked, which process is only the effect of high excitement and inflammation, the appearance of the sore is generally florid and healthy, and it is usually remarkable for the rapidity with which it proceeds to cicatrization. This, however, must be understood with some reservation, for it now and then happens, when every thing appears to be going on well, that the surface of the sore begins to look glossy, the secretion is altered both in quantity and quality, the granulations are loose and unhealthy; and this is the preliminary step to the establishment of the ulcerative process. What, then, it may be asked, are we to do under these circumstances? To this I answer, that we must give mercury, and which we can do in this condition of the sore with as great a certainty of doing good as we should before have done mischief by its exhibition; for the whole circumstances of the case have become changed; the constitution of the patient has been materially reduced, as well as altered, by the previous treatment. Now there is evidence before us that the syphilitic poison is beginning to assume an activity; and it is at this period, too, that occasionally this suspicion becomes converted into a reality, by a slight renewal of feverish symptoms, by want of sleep and restlessness at night, attended with pains in the shoulders, elbows, knees, and ankles, and, soon after this, by an eruption of copper-coloured spots, or papulæ, sometimes with acuminated heads in the centre, at others having thin branny scales; and which eruption generally selects the breast, shoulders, or forehead, for its first appearance. In either of these events, then, I recommend the immediate administration of mercury—that medicine so often abused and depreciated, but to which the profession always has returned with renewed faith and confidence, and to which might be fairly applied the remark that Helvetius has made relative to the Catholic religion, which he says has often been vehemently attacked, but has always a means of defence; though, in defending herself, she has been obliged to give up some of her outposts. So it has been with mercury: often assaulted by ignorance, or by prejudice, it has again lifted up its head —but not without losing some portion of its importance, and becoming restrained within more confined limits, and adopted under more precise regulations.

The gangrenous ulcer, which, as I have before said, sometimes heals with rapidity after the gangrened parts have been thrown off, proceeds to cicatrization under the use of simple applications; the health and strength daily improving: so that by the time cicatrization has taken place, the patient is restored to his pristine state of health. This desirable event will be much hastened by the employment of cinchona with the mineral acids, the sulphuric in particular; and a change of air will be highly beneficial as soon as the local disease will permit of motion. In these instances I should therefore upon no account have recourse to mercury. It is more than probable that secondary symptoms will not ensue; and if they should, it will be time enough to arrest them when they appear. But it is, I think, not only fair towards the patient, but prudent, as far as your own character is concerned, to explain to him the probabilities of the case, that his attention be awakened by any deviation from his usual state of health, and that no time be lost under a mistaken view of his condition. Thus far with regard to the gangrenous ulcer when it heals kindly and uninterruptedly; but when, on the contrary, the healing process suddenly becomes arrested, as I have before said, and the appearance of the sore to change in the manner I have described, the first inquiry to institute is, whether the general health partakes in the alteration; whether the stomach or bowels have become deranged, or there are any general causes which can have led to this deteriorated condition of the sore: if this should appear to be the case, a cathartic, with an antimonial

medicine, and a recurrence to an abstemious diet, will probably put all to rights again. The ulcer will again put on its florid look, and proceed in its progress towards cicatrization; but if, on examination, none of those symptoms are detectable, mercury should be administered at once. The mode of doing so is perhaps of less importance if the bowels are not irritable: the blue pill, mixed with a small proportion of opium, in doses of five grains, may be given twice or three times in the day; and of the strong mercurial ointment a drachm may be rubbed into the thighs every night. The object here is to have the evidence of mercurial action upon the system, which is best denoted by the condition of the gums. It is not that a sore mouth, in the usual sense of the word, is at all essential to the cure, but it is the best proof of the general action of the remedy upon the system; and the curative process is not so satisfactorily or certainly performed where that proof cannot be obtained. In the administration of mercury one precaution is absolutely necessary; either perfect confinement to the house, or such care in the exposure to weather, and such precaution against damp clothes or wet feet, or other sudden transitions of temperature as shall be equivalent to it. These are old precautions, it is true; so old that I am sorry to say they are worn out; and now we meet with people every day who are getting cured of syphilitic complaints, and taking a mercurial pill or two, as they will tell you, pursuing their usual business; or, what is still worse, usual debaucheries, without fear of the consequences; but this is a line of conduct which I never would sanction.

Under the mode of treatment I have mentioned above the ulcer will most usually reassume a healthy aspect; not, however, all at once, but generally from the circumference to the centre. Fresh granulations will make their appearance; and now it becomes a question how long the mercurial treatment must be persevered in. I know of but one criterion by which to form my judgment; for I cannot believe that in every individual the same precise quantity can be necessary, or that it acts upon the system by its weight. This is not the place for this inquiry; but I must observe, that I should not think my patient secure as long as any hardness, or elevation, or diseased condition of the cicatrix, remained; but that I should continue to administer the remedy cautiously and uninterruptedly, until that end was obtained; but it would be equally unwise to persevere in the exhibition of the remedy, if, instead of putting on a healing aspect, when mercury had produced its legitimate effect upon the system, ulceration should continue to spread; and still less if that should be the case, as it sometimes is, where mercury excites its own specific fever. In either of these events it must be abandoned immediately, or consequences much more serious will ensue; and then the sore must be treated upon those common principles of surgery which would apply to unhealthy ulceration in other situations. If, however, no evil consequences to the general health follow the use of the remedy, the local treatment of the ulcer will be very simple. To keep down luxuriant granulation by the lunar caustic, or a weak solution of sulphate of copper, or by an ointment composed of the red precipitate, with some simple ingredient, will generally be found sufficient for the purpose. To illustrate the symptoms, and mode of treating this form of ulceration, I shall give a sketch of three cases; one recorded by Mr. Rose, another by Mr. Carmichael, and one that occurred in my own practice; and I have so selected them, that in the first you should perceive the most aggravated form of the disease; in the second one it is obviously the result of improper treatment in the first instance; whilst the third is an example of secondary affection coming on not above a month after the cicatrization of the primary sore.

Thomas Clarke, of a full habit of body, twenty-one years of age, was admitted into the Coldstream hospital with six or eight deep irritable sores on his internal prepuce: the surface of these was covered with a dark coloured slough; they had thickened and highly inflamed margins; and discharged a very acrid ichor. He complained of much headach and thirst; had a quick pulse, and other febrile symptoms. The sores had been present three days, and were perceived a week after a suspicious connexion; the glands in each groin were enlarged. He was ordered a brisk dose of jalap and cream of tartar, and six grains of antimonial powder, and a small quantity of Epsom salts every four hours. Cold saturnine lotion was applied to the parts. On the two following days the febrile symptoms were increased. He had restless nights; frequent cold chills; much headach; and a constant irritable cough. His tongue was covered with a white fur; his pulse was quick, and not easily compressed; and his skin hot and dry. He had much pain in the sores, which were rapidly extending and running into one another; a dark coloured inflammation surrounded them, which terminated immediately in gangrene. He had been freely purged: the cold lotion was laid aside, and the decoction of poppy used as a fomentation. On the third day the sloughing had extended, and a considerable portion of the corona glandis was destroyed; a hemorrhage took place from it this morning, by which he lost a pint of blood; an artery of some size in the glans was secured by ligature. Equal parts of balsam of sulphur and oil of turpentine were applied to the sore; and the cold lotion was again had recourse to. The following day the sloughs had no disposition to separate; and on the body of the glans, anterior to the margin of the sore, several dark coloured spots had shown themselves. He had violent burning pain in the glans; his face was flushed; his tongue covered with a brown fur; and his pulse 102. The day after he had two returns of hemorrhage, but not to a great extent; he

was somewhat less feverish, but weaker. The prepuce was slit open, the sore dressed with compound tincture of benzoin, and a fermenting poultice applied over it. He was ordered beef tea, and a draught with camphor mixture and spirits of ammonia every three hours, and some compound ipecacuanha powder at night. The next twenty-four hours the burning pain was relieved, there was a good deal of dark-coloured discharge in the poultice, the glans was separated from the corpora cavernosa, and in a few days the whole sloughs were thrown off, but it was not until the lapse of ten days that healthy granulations began to show themselves, and within three weeks after the sore was healed. This man is noticed at the end of some months as not having had secondary symptoms.

Such are the principal facts of this very instructive case. Mr. Rose anticipates the remark that I should wish to make, that an early bleeding would probably have been very beneficial; but this history points out to us almost every circumstance necessary to be kept in mind in this species of ulceration: first, the great local pain, the rapidly extending and gangrenous character of the sore, the high symptomatic fever, the benefit derived from spontaneous hemorrhage, and the advantage of warm fomentations: it would also appear that the terebenthinate application was premature, inasmuch as the inflammatory symptoms had not at that period expended themselves.

I next present you with Mr. Carmichael's case, premising that he denominates the sore phagedenic. Michael Cleary, admitted on the 19th of December; the entire prepuce either presenting a sloughing or a phagedenic ulcerated surface; the glans penis could be seen in a similar sloughing and phagedenic state, projecting through the ulcerated edges of the prepuce, the entire penis swollen and inflamed, pain excessive, high symptomatic fever, pulse 120. He stated that the ulcer first appeared on the glans about a month before his admission, and that he had rubbed in fourteen drachms of mercurial ointment; he was bled to ℥xvj.; had the solution of tartarized antimony prescribed, and to the parts a fomentation and poultice: the 20th, he was bled again: on the 26th, the greater portion of the glans was in a state of slough; on the 2d of January the entire glans and prepuce had separated; the symptomatic fever reduced. Ext. Conii, gr. v. was ordered three times a day. The ulcer healed so rapidly that it was necessary to introduce a piece of bougie into the urethra to keep that passage open.

Mr. Carmichael's commentary upon this case is, that the loss of the glans and prepuce might have been prevented, if the depleting plan had been adopted instead of mercury before his admission. This I believe to be a very just and important remark; and I quote the case in order to show you the mischief of prescribing mercury under that peculiar condition of the system, both locally and generally. The last illustration of this ulcer which I have to relate is that of Drummer Colquhoun, of the Grenadier Guards, who was admitted into the hospital with a deep sloughy sore, extending round the upper half of the corona glandis. The penis was much swollen, and the next day he could not retract the prepuce. The pain in the part was very great, and his pulse was both frequent and full. Six leeches were applied to the penis, a brisk purgative was ordered, and on the following day he was much easier; for, in addition to the blood drawn by the leeches, there had been a considerable hæmorrhage from within the prepuce; the penis was fomented, and he took a saline antimonial medicine every six hours. In about ten days he was enabled to denude the glans, when the ulcer was found to be in a healing state. It healed in about another fortnight, and he was discharged to his duty, having used no mercury. In about a month this man returned to the hospital, having very visibly declined in flesh. He complained of great pain in all his limbs, very much aggravated at night: the left elbow-joint was much enlarged, and very painful to the touch, but not at all inflamed; but there was no fever, and the appetite was unimpaired. A blister was applied to the elbow, and he was ordered five grains of the blue pill twice a day. The blister relieved the pain, but did not diminish the swelling. In about ten days his mouth became tender. He continued to take mercury for five weeks longer, entirely lost all his complaints, and had experienced no relapse at the end of two years.

Upon this latter case I shall make no comment; I relate it to you merely as establishing the fact I mentioned above, of the occurrence of secondary symptoms occasionally after the gangrenous ulcer, even almost as soon as it has healed.

From these cases you will, therefore, perceive both the usual progress of the symptoms, the local termination, and the possible consequences that may result from it.

SLOUGHING ULCER.

I next proceed to the description of what, in my phraseology, I call the *sloughing ulcer;* which answers to the ulcus induratum of Mr. Evans; and which Mr. Carmichael, I imagine, has described as the true Hunterian chancre, followed by the scaly venereal disease. Of this, however, I am not positive; and I draw the inference merely from his description. At all events, this is a form of ulceration not by any means uncommon in this country, and is most assuredly followed by a train of secondary symptoms, unless it is treated by mercury. The appearance of the sore is very remarkable, so that when once it has been seen it will scarcely be mistaken afterwards. Its usual situation is the inner prepuce, just where it unites with the glans penis. The first coming on of this ulceration is, I believe, denoted by the formation of a pimple in many cases: it also makes its appearance sometimes in con-

nexion with a large patchy excoriation of the surrounding parts; which, however, heals up quickly and readily, leaving only a central spot, which is the nucleus of the ulceration. This quickly enlarges, and is characterized by a cartilaginous hardness, without pain or inflammation: the colour of the sore, which is a little excavated, is of a livid bluish tint: it affords an unhealthy foul discharge, having little or no resemblance to purulent matter; and the sore extends by casting off sloughy shreds, and rather burrows into the substance of the parts than extends much laterally. In this case the general health suffers no derangement; and there is no local pain, excepting where the prepuce is long, and an attempt is made to denude the glans. On the first establishment of this sore, it is generally easy enough to draw back the prepuce so as to ascertain its nature, if the patient complains early; but the lapse of a few hours increases the surrounding hardness so much that it afterwards becomes impossible to denude the glans until the sore is reduced to a healing condition. Now the treatment of this sore is very simple; and there is no species of ulceration which more readily yields to the judicious employment of mercury. As an application to the part, the black wash, composed of one drachm of calomel to four ounces of lime-water, is by far the best; indeed, as far as my experience goes, I should say the only one, required. If the prepuce cannot be withdrawn, the surface of the ulcer may be washed with this lotion by means of a syringe: in common cases, it may be applied upon a piece of lint two or three times a day. In the general administration of mercury in this case, I should insist upon the absolute confinement of my patient to the house—entirely, if possible, but certainly in the evenings; for I have observed that there is always a strong tendency to constitutional affections following this class of sores; and I cannot, therefore, recommend a trivial or slight use of the remedy. My plan would be, to let the patient rub in a drachm of the stronger mercurial ointment, night and morning, until the mouth became affected, simply tender; and afterwards to proceed more slowly, carefully watching its effect upon the general health. I have always found, when the mercury began to act upon the system, the most decided and rapid change in the face of the sore: a florid red succeeds to the livid colour, the matter discharged is good, and the surrounding hardness disappears rapidly. When this is the case the black wash is no longer useful as a local application; a clean piece of lint is alone necessary; and nothing remains but to continue the administration of the mercury until the hardness be entirely gone—absolutely invisible: and then let it be understood that our patient, though well, is in a condition far from safe, with a constitution loaded with mercury, and prone to disease from the very circumstance of long confinement: he is anxious immediately to return to his former habits of life, nor can we prevent this; but we are at least bound to lay before him the probable consequences that may ensue, if, in defiance of caution, he exposes himself to the chance of taking cold, until the lapse of two, three, or more weeks. These consequences sometimes become very serious, and lay the foundation for numerous diseases, even worse, perhaps, than that from which he may have just escaped. Of these I shall have to speak when I come to consider the effects of mercury on the constitution: I now only mention them in order to put you on your guard in the treatment of these patients after they are, to all appearance, cured of their complaints; for there is nothing more perplexing and vexatious, to the young surgeon especially, than to have his syphilitic patients return upon his hands with symptoms so equivocal that it requires much judgment to discriminate them from the real consequences of the venereal disease, and much firmness to quiet the alarmed mind of the patient, and to prevent him from having recourse rashly to mercury—the very source of his present maladies. The veteran surgeon may, perhaps, despise these reflections; but they are not the less important because he may stand firm in the security of a great name, and an established reputation: the young surgeon has this edifice to raise; and he can only succeed in so doing by securing the confidence of those who entrust themselves to his care: and nothing, surely, can tend to shake that confidence more than the return of disease at *the end* of a tedious and disgusting process; in fact, at the very moment that he considered himself as free from all medical restraint.

APTHOUS ULCER.

That species of ulceration which I designate the *apthous*, is one of common occurrence: it is the form in which syphilitic virus establishes itself usually on the frænum, or rather the little depressions on each side of it, as well as upon the glans penis itself. The first appearance of this sore I am unacquainted with: I have never seen it otherwise than as an apthous spot, surrounded with a deep red circle of inflammation. It is often stationary, or at least makes but little progress for a few days; but at last the ulcerative process is established. If situated near the frænum, that part either becomes included within it, or is undermined and destroyed from below outwards. The ulcer frequently extends itself in a circular manner, or rather like the segment of two circles, until the upper one sometimes reaches the orifice of the urethra, and often extends a little within it, causing great smarting and uneasiness in passing the urine. If situated on the glans there is frequently but little inflammation round the edge of the ulcer; but it will burrow deeply and ulcerates rapidly, forming a cup-like excavation. It has often been recommended to destroy these apthous appearances when first discovered; and, under certain conditions, there can be no objection to doing so: but I think those who have had extensive experience in these complaints will readily admit that they have often been

disappointed in their expectation of destroying the disease by this means: on the contrary, they will have often found ulceration spreading itself more rapidly in consequence of the irritation produced; and I believe that the employment of the caustic is only successful in those cases where the surgeon is enabled to apply it before the process of ulceration has begun: for when the apthous spot is surrounded by a well-defined and decided margin of inflammation, not only is it of no use as a preventive; but it has appeared to me generally to hasten the extension of the sore.

With respect to syphilitic ulcers on the glans penis, I have farther to remark, that this part alone is not nearly so often the seat of disease as might have been anticipated, and that although it is very common for ulceration to spread from the edge of the internal prepuce upon the glans, it is by no means so to find a syphilitic ulcer confined entirely to the glans itself; and when mercury is administered, it is equally necessary to be cautious in its exhibition, and to watch its action upon this part; for if phagedenæ become established, the rapidity with which it is destroyed is truly alarming: in sores situated and commencing solely and entirely on the glans, I should be loth to adopt the use of mercury, unless the margin was inflamed, raised, and hard, for it is in this situation that this character, supposed to be peculiar to venereal ulceration, is always to be met with. Mr. Howard mentions a useful example of this kind, and a similar case came under my care some years ago, where, in defiance of the opinion of one of the most celebrated surgeons of this town, a small uninflamed simple sore on the centre of the glans was converted by the inordinate use of mercury into a deep excavated ulcer, occupying a large space of the glans; the patient had taken mercury by the mouth, and rubbed in without advice, or rather against it, and had travelled in this way from Paris to Geneva, where becoming alarmed, he returned to London, and it was upwards of three months before the sore was healed, leaving a considerable depression from loss of substance. With regard to the treatment of the apthous ulcerations, then, you may, if they are presented to you in their very origin, supersede them by the employment of the caustic; if ulceration has commenced, the use of a mild saturnine wash, or a gently stimulating application, (the mel eruginis, largely diluted, or the sulphate of copper) will be advisable. Mercury should also be exhibited; but it is better in these cases, I believe, to commence slowly, and to prescribe it with moderation. I am generally contented with its internal exhibition, and prefer the blue pill to every other preparation; rest and quietude are equally necessary in the cure of these ulcerations as in either of the former: first, with reference to the general health, and secondly, because bubo is very apt to accompany or even to succeed to these sores: but it is remarkable that when the glans penis only is the seat of ulceration, that enlargement of the inguinal glands seldom takes place. The time requisite for the perfect cicatrization of these sores is usually very considerable, especially where the frænum becomes involved in the disease, and whenever that is the case its destruction is, I believe, inevitable. I do not think these sores usually go through their several stages in less than from twenty to thirty days; and here I am not inclined to press the exhibition of mercury to any great extent; when the ulcer is healed it may in general be discontinued; there is seldom any hardness remaining, and wherever buboes accompany it, and proceed to maturation, the continued exhibition of mercury must be looked upon with much apprehension; for beyond a certain point the perseverance in this medicine appears to do decided harm, and I have often had cause to lament its continuance where the ulcer just healed has begun again to assume an unhealthy aspect, or the bubo, if suppurated, to discharge a profuse and sanious matter, the surrounding skin to ulcerate, and the general health to give way. Those ulcers which are situated in the neighbourhood of the frænum, which they invariably destroy, are extremely apt to put on this rebellious appearance when mercury has been pushed too far or continued too long: they are not often accompanied by bubo, but they will continue to retain an unhealthy ash-coloured appearance, neither extending nor diminishing much in point of size, for many successive weeks; neither mild nor stimulating applications appear to have the slightest effect upon them; the patient's health is usually good, but if rigidly examined, there will be found to be some slight deviation of the pulse from the natural standard, the rest will be acknowledged not to be sound, and the appetite capricious, or diminished. I believe there is nothing that can be recommended with confidence in this condition of the ulceration—perhaps the balsom of Peru or copaiba, mixed in equal proportions with yolk of egg, forms the best local application: the patient may be sent in a favourable season to the sea-side; he may be freely purged, or take the sarsaparilla occasionally with advantage: all we can say is, that the sore will get well; but it generally requires twelve or fourteen weeks to complete the cure under such circumstances; and I scarcely know any case more annoying to the surgeon and the patient, for the ulcer will often not exceed the size of a silver threepence, and yet week after week shall elapse, and notwithstanding all your endeavours, it shall not vary an atom in size, nor alter its character in the smallest degree. I need not say that these are proofs that mercury has been carried too far; but it must be your care to prevent these evils by watching cautiously the condition of your patient, being satisfied with a very mild and careful exhibition of the remedy, and pausing the instant you find any sign of either constitutional or local derangement. In general I am content to prescribe the blue pill in doses of five grains twice in the day; the operation of which upon the system will become appa-

rent in seven or eight days in the majority of instances, and then all we have to do is, to keep up this effect until the ulcer is perfectly healed. The plan of treatment necessary to be adopted in those melancholy cases which we sometimes meet with, where, in consequence of the rash administration of mercury, phagedena has taken place, will come to be considered when I treat of the deleterious effects of mercury; for according to my arrangement I do not acknowledge a phagedenic ulcer as the direct consequence of syphilis.

I have not said so much, perhaps, as I ought to have done regarding the local management of the sores just described; but you must vary your plan according to the different stages of the ulceration: in the inflamed condition mild washes, and poultice where the situation of the sore admits of it, will be most advisable; after which the red precipitate ointment, or Bates's camphorated lotion, or the sulphate of copper diluted with water, will expedite the formation of healthy granulations. As a general remark it may be observed, that greasy applications are not to be recommended in the early stages of these ulcerations; and when they have become healthy, little else than cleanliness and dry lint will be requisite: when the frænum gives way, a trifling hæmorrhage will occasionally occur, but it usually ceases spontaneously, and at most only requires the application of caustic or the blue vitriol to arrest it.

RAISED ULCER OF THE PREPUCE.

I come next to consider the only remaining distinct form of syphilitic ulceration which I am enabled to make out, that is, the raised ulcer of the prepuce, which Mr. Evans has called venerola vulgaris, admitting two varieties of it, and Mr. Carmichael has designated by the name of the primary venereal ulcer. This ulceration demands our especial attention, since its appearance in its several successive stages differs very much, and therefore the same description will not apply to it throughout its whole course; it is also of very common occurrence, and leads to constitutional symptoms in a great majority of instances, though that appears to be less certainly the case than in the Hunterian chancre, or the sloughing one. This species of ulceration has been noticed by Mr. Howard in very distinct terms: he says, "Another form in which the disease appears as a first symptom, is that of a brownish kind of scab, somewhat depressed, as if the parts were rotten beneath, with the margin of the scab separating from the surrounding skin." This description is strictly applicable to one stage of this ulceration, but only to that one; and therefore we must pursue it from its first invasion, in order to understand the various aspects which it may occasionally present, since we may be called upon to decide upon its character in various periods of its existence. This sore is liable to more variety also, in consequence of situation, than any other, for its appearance upon the outer skin of the prepuce, penis, or scrotum, is very different, in degree at least, from that which is met with when it is situated within the prepuce, or on the glans itself; the great characteristic is, that in no stage is the hardness surrounding the sore so great as in the sloughing ulcer; there is, however, more pain, the margin is commonly inflamed, and the healing process very tedious: much thickening also remains after cicatrization, excepting when seated on the glans, when a depression is usually the consequence. This thickening of an ulcer has been made by one writer on syphilis as the best criterion of every form of venereal ulceration, and he declares that he is so much guided by the feel of the surrounding parts, that whenever called upon to pronounce whether a suspected sore be a chancre or not, if his reputation depended on the decision, he would rather trust to his fingers than his eyes, provided he had the choice of either, but was debarred the use of both. I do not quite concede to this opinion in all its extent; but unquestionably in treating those ulcerations of the genitals which do not fall exactly within the descriptions given by authors, the circumstances of induration, inflamed and hard margins, would go a good way in deciding the character of the sore, and consequently in regulating our practice.

The elevated ulcer has, as I before observed, four stages; in the first instance it appears as a pustule, which, after the lapse of some days, ends in the formation of a scab, ulceration going on underneath it, and the matter finding at length its exit from the edges of this scab. The form of this ulcer approaches to the circular, especially when upon the outer skin of the penis, or on the scrotum. This scab is usually of a brownish colour; and as it continues to increase becomes more elevated and darker. When this falls off, or is removed, a hollow ulcer is discovered, of a dirty and unhealthy hue; the edges of which are at first raised, but a spongy kind of fungus soon rises above the level of the margin; and hence this sore derives its common appellation, which I do not think by any means an happily chosen one; since, when seated on the inner surface of the prepuce, this characteristic mark exists in a minor degree, and when on the glans, the very reverse of elevation takes place. Mr. Evans observes, that when this sore has attained its greatest size it remains stationary for a certain time, and many other authorities confirm this remark: at all events it is a form of ulceration that is not quickened, in its period of cure, by the abstinence from mercury, which modern authors have recommended, and among the rest Mr. Evans, whose descriptions, however, are admirable. It is chiefly this species of ulceration which gives rise to so many various and discordant opinions respecting chancre; for the characters of the sores I have before described are strongly marked; so, also, is the elevated ulcer on the skin of the penis, or the outer prepuce, when the ulcerative process has made some progress; but when it is seated within the prepuce, or from thence extends

to the glans, discrimination is more difficult. In these latter situations they are more painful; or rather, I should say, more irritable, for pain is hardly the appropriate term. There is one remark made by Mr. Evans, which I must beg to repeat, regarding this sore whereever situated, for it is strictly true. After the ninth day, he observes, they are seldom doubtful; when, by drawing the skin back, and making allowance for the form of the parts, the raised edge and surface cannot escape discovery. It is on the point of treatment that I differ with the gentleman last mentioned, as well as from Mr. Carmichael. I believe that this sore has certain stages to run, as have all ulcers, before they can be healed; but experience teaches me that mercury, administered at proper seasons, under certain restrictions, and with moderation, if it does not facilitate or expedite the cure, *does prevent the secondary consequences.* I speak this with perfect confidence. The modern authors who are hostile to the use of mercury, admit that constitutional affections do follow these sores in a certain proportion of cases; and I as boldly affirm, that mercury, judiciously administered, will prevent this occurrence in by far the majority of instances. Let it be recollected, that of 1400 cases, of all sorts, treated by mercury, it was proved that secondary symptoms only succeeded in 14; and let every military surgeon, who had been accustomed to follow discreetly the mode of cure usually practised twenty years ago, recollect how rare such instances were. I do not mean to assert that you should give mercury in every stage of the disease, or in defiance of constitutional idiosyncracy, or the palpable evidence of its producing mischief to the general health; but there are rare exceptions to a general rule; and although I should be inclined to await the first nine or ten days, until ulceration had become fairly established, and the red margin with elevation, and the peculiar fungoid appearance of the sore had amply developed its character, I should then no longer hesitate in prescribing it in the same mild and gentle manner I have before recommended; keeping my patient tranquil; regulating without too much lowering his diet; and intefering with the sore itself as little as possible. In the early stage it requires only soothing measures; afterwards, the application of the lunar caustic, or the sulphate of copper, to keep down the granulations, is alone sufficient.

I have now attempted a description of all the peculiar forms of ulceration to which the term syphilitic may, in my opinion, be fairly applied; and I now beg to offer a few considerations which the young surgeon should always bear in mind when called to a case of ulceration of the genitals. 1st. He should consider whether the sore is to be classed among those likely to lead to constitutional symptoms. 2d. Whether it is capable of being arranged under either of the distinct heads above described; and, 3d. To which of them it bears the greatest resemblance. 4th. The period of its existence, the previous history, and the *stage* in which it is presented to his view. 5th. The constitution, mode of living, and present state of health, of the patient; and, 6th. Whether mercury has been previously exhibited or not. These inquiries, together with attention to other minute particulars, will enable him to reconcile many contradictions, and to clear up many a doubtful case, since it is obviously impossible to teach the pupil every shade and variation of aspect which ulceration on this or any other part of the body may occasionally assume; and much must always be left in the elucidation of this disease, as well as, indeed, of every other, to the exercise of his own discretion; and the application of those general principles which he has imbibed in the course of his medical education.

I shall now proceed to treat of chancre in the female, of phymosis, and paraphymosis, as occasionally attending syphilitic ulceration, and then take up the subject of bubo.

I have already spoken both of phymosis and paraphymosis as concomitant symptoms of the virulent gonorrhœa; and I now have to say a few words upon these unpleasant appearances when they are met with in conjunction with syphilitic ulceration. Both phymosis and paraphymosis only occur in those persons who have the prepuce very long, so that the glans is always kept covered up; a formation which is congenital, and very troublesome; sometimes, even in infancy; though, I believe, seldom, if ever, requiring an operation for its removal at that period of life. Mr. Hey and M. Roux both observe, that in cancer of the penis, the subjects generally have been found to have a phymosis from the birth; but with this I have nothing to do, and must confine my remarks, therefore, to this condition of the parts when ulceration is supposed to exist underneath. This fact may in general be ascertained by feeling externally all round. There will be tenderness, and often hardness, perceptible at the spot where sores exist. The nature of the discharge also will generally guide your judgment in some degree. If the discharge is acrid, ichorous, thin, and profuse, it is most probably produced from a breach of surface. That which is afforded by the external, or spurious form of gonorrhœa, has more the character of pus; and usually a peculiar faint odour arising from the confined secretions of the mucous glands. The appearance of the prepuce and phymosis is thicker, and more tumid than natural; and any attempt to denude the glans is attended with much pain. If the ulceration has been once seen before the phymosis takes place, our treatment of the sore will be more easy; but if not, we must recollect that inflammation is the great universal cause of this appearance; and, therefore, both locally and generally, our object must be to soothe, and not to irritate the parts. I therefore am unfriendly to the administration of mercury in the first instance, or to the injection of any stimulating wash, unless there is good ground

for believing that no breach of surface exists; but I would recommend the external application of the saturnine lotion. An injection of the same, frequently, between the prepuce and glans; or, perhaps, the application of leeches, not to the prepuce itself, but to the body of the penis, or the perinæum, or even general bleeding, may be occasionally necessary. The penis, in this condition, must not be permitted to hang down; and the patient should be enjoined absolute rest, and the horizontal posture. If inflammation runs very high I have often found warm applications and poultices more serviceable than cold ones; but the frequent injection of the inner surface of the prepuce, with some mild fluid, must never be omitted. The penis may also be fomented by holding it over the steam of hot vinegar and water.

With regard to the operation proposed for this affection, I am inclined to think it seldom necessary; and I should restrict it to those cases wherein the pain and tumefaction are very great, and the ulcerations within are of that highly inflammatory character leading to the gangrenous sore. Here I think it better at once to relieve the parts by slitting the prepuce open, provided the general treatment proves unavailing in arresting the progress of the disease, than to wait for its destruction by the process of mortification; first, because by a timely operation the loss of parts may be prevented, and the ulcerations can receive then the immediate benefit of whatever local application may be thought necessary for them. The mode of performing this operation is very simple; a grooved director may be passed along the upper surface of the prepuce, and the part divided from within outwards with a sharp pointed bistoury. But I must again repeat that this operation should not be had recourse to except under the above named circumstances; for it often has happened, that when adopted in cases of chronic ulcers, the divided edges of the prepuce have put on the same appearance as those ulcers, and the cure, instead of being hastened, has been much delayed. By mild treatment, then, by purging, by rest, by diet, &c. the phymosis will commonly yield in a few days; and when the glans is denuded, your conduct will of course be regulated by the appearance and character of the sore or sores you have to deal with. But let the patient be warned, whilst the prepuce is in this condition, just, perhaps, permitting the glans to be uncovered, with some difficulty, that he does not allow it to remain behind the glans for any length of time; for in that case he will most probably have to lament his negligence by the formation of a paraphymosis; therefore, as soon as the sores have been seen, or dressed, let the prepuce be quickly returned to its natural situation. Phymosis sometimes makes its appearance at another stage of the disease; that is, when sores have existed for some time, and are apparently healing. In this state small pimples are occasionally formed round the extremity of the prepuce, which breaking, soon increase in size, and form small ulcers, with a good deal of thickening about them; totally preventing the glans from being uncovered. It is in this chronic condition of the parts that stimulating applications become necessary. These small secondary ulcerations may be freely touched with the lunar caustic, or sulphate of copper. Stimulating injections, thrown up between the prepuce and glans, are highly beneficial also in this condition of the parts. Of these, the lotio flava, formed of oxymuriate of mercury and lime water, is one of the best; or the oxymuriate, with water only, may be used, in the proportion of two grains to eight ounces of water; or, perhaps, even stronger. And if mercury has been employed, it must be immediately omitted; though I have occasionally found great benefit from the fumigation of the part with the re-sulphuret of mercury: the quantity of this substance to be employed is from half a drachm to a drachm, the penis being enveloped in linen, so as to prevent the escape of the vapour.

In whatever way this chronic form of phymosis is treated, it will occasionally give great trouble, and prove very obstinate; and cases occur where the extremity of the prepuce forms a hard ring, almost shutting in the glans entirely, and sometimes even obscuring the orifice of the urethra. In this state the operation of circumcision has been recommended; which is performed by drawing the skin forwards, and cutting a circular portion off with one sweep of the knife, taking care not to carry the incision so far as to divide the frænum. Sometimes a considerable hemorrhage follows this incision, but which is more troublesome than dangerous. The part should afterwards be dressed with dry lint, and poulticed. It must be observed, however, that the necessity for performing this operation seldom exists.

In every mode of treating a phymosis, however, it must be recollected that it is only an effect of some other symptom; and that, therefore, above all things, we are not rashly to have recourse to mercury, which in the event of inflammation being present, must inevitably do mischief, a remark which Mr. Travers has put in a very strong point of view; neither can that medicine be attended with any beneficial effects in many cases where there is no inflammation, for example, in the cases of warts, which is a very common cause of phymosis, and for which we now do not think mercury necessary, although a complete mercurial course was recommended for their removal as late as in the work of John Howard. We are told that care must be taken when a phymosis exists in conjunction with sores on the internal prepuce aud glans, that when they are healing they do not form adhesions; certainly such an event is possible when the ulcered surfaces are exactly in apposition to each other, and when they are both in the same condition, or are healing *pari passu;* but these circumstances are not usually met with; and the frequent use of in-

jection between the parts, with an occasional movement of the prepuce, will effectually prevent the possibility of such an occurrence. The points, therefore, to attend to, and the principal inquiries to make when called upon to treat a phymosis, are these: how long it has existed; whether it is connected with gonorrhœa solely, or with ulcerations within the prepuce, or merely arising from want of cleanliness, or the existence of warts; whether it is accompanied with pain and inflammation, or simply in a chronic indolent form; and, lastly, what must never be omitted when we are consulted on any symptom connected with syphilis, whether mercury has been exhibited or not; and especially whether the appearance came on during or after its use, or existed previously. These few inquiries will generally enable you to adapt your treatment to the peculiar circumstances of the case before you; for though every enlargement and elongation of the prepuce is called a phymosis, it is evident that the same precise line of practice is not equally applicable to them all; and this remark, though a very simple one, is not the less necessary to attend to, for no small quantity of mischief has occurred by calling many dissimilar conditions by the same name.

Respecting paraphymosis, as an attendant upon syphilitic ulceration, I have nothing to say in addition to that which I have already urged when speaking of it in connexion with gonorrhœa. The prepuce may most commonly be returned by the hand, cold lotions being first applied to the glans, in order to contract the part as much as possible, taking care to squeeze the blood from this part whilst the prepuce is drawn forward. If success cannot be obtained in this manner, an operation will be requisite; which consists in separating, as much as possible, the swollen portions of the prepuce, and cutting through the strictured band by which the glans is compressed, and, as it were, strangled; but I am quite convinced that this will be seldom necessary, unless the patient has neglected his situation for some considerable time. If applied to within the first twenty-four hours I should not despair of relieving the paraphymosis by the means above detailed.

It will not be necessary to detain you any length of time in the description of primary ulceration in the female sex. The more simple construction of the parts of generation; the general tenor of their mode of living; and their being less susceptible of inflammation, render these sores, under common circumstances, of comparatively little consequence. It sometimes, however, happens that sloughing, or gangrene, take place to the extent of even destroying the external labia; and phagedena, especially, is by no means an uncommon consequence of an ill conducted, or profusely administered course of mercury; as well as sometimes produced without mercury, in those broken down constitutions which poverty, and the pernicious habit of dram drinking, too often lay the foundation for in that unhappy class of females who exist by prostitution; but of phagedena it is my intention to treat at length when considering the diseases arising from mercury. What I have before said relative to the treatment of the different forms of syphilitic ulceration in the male sex, equally applies to the female. The situation of these ulcers is either upon the external or internal surface of the labia; upon the nymphæ, the clitoris, and its prepuce, or the raphe, and the lower part of the vestibulum. When ulcers are situated externally on the labia they generally put on the form of the ulcus elevatum, and are covered by a scab. It may no doubt occasionally happen that a sore may be situated within the vagina, or even on the os uteri; and it appears to me that many cases of infection, otherwise very difficult to explain, may be readily understood to arise from this cause; for as there is but little pain or sensibility attending these sores in the majority of instances, and as the discharge is often but trifling, and the parts themselves are so moist, and discharges are so frequently met with even in women otherwise healthy, it is by no means improbable that a small ulcer within the vagina might occasionally be productive of much mischief, both to the patient herself and others who have connexion with her; and in my opinion this is a much more rational mode of explaining the appearance of constitutional symptoms unpreceded by visible primary sores, (I mean where gonorrhœa also is not found to be present, for in that case we do not want the assistance of ulceration to account for their presence,) than by the doctrine of silent absorption, as it has been called; or the still more improbable explanation of the communication of the disease by a sound person sleeping with a diseased one, an instance of which is related by Swediaur. But whoever will attentively peruse this, and similar cases, will, I conceive, easily see through their fallacy, and form other conclusions, more consistent with reason. Formerly, indeed, the supposition I have ventured to make was attended with a difficulty which we have not now to contend with, for it was believed that a syphilitic ulcer could not get well without mercury: and even Mr. Pearson, in his lectures, made this a criterion by which to judge of its nature; but now we are convinced that this is not the case, there is nothing that should prevent our supposing that a primary ulcer may have existed some way within the vagina, so as not to be detected, but by an especial examination, and that this may have given rise to all the subsequent mischief. In the female a plurality of ulcers is more common than in the male sex, and their character is most frequently that of a small ulceration tending to the circular form, having, in the commencement, rather an ash-coloured apthous appearance, and seldom increasing to any great size, though often surrounded with the true inflamed and thickened margin. These sores usually take a considerable space of time to heal, and especially if

situated at the lower part of the vestibulum, or about the raphe of the perineum; for there the urine interferes with them very much. As women are very prone to the formation of bubo, it will be necessary to recommend to them repose; and the situation of the sores renders this the more desirable, as applications cannot otherwise be conveniently retained. When the sores are in an uninflamed state, the black wash, or Bates' camphorated water, form the best local remedies, for ointments are scarcely capable of being retained in their situations from the lubricity of the parts.

The next primary symptom of syphilis which will engage our attention is a bubo. This has been asserted by many writers to have been first noticed as late as the year 1540, or thereabouts; but this is a mere error, and one, indeed, that can hardly require us to look out for authorities to confute; for unless the nature of the animal economy has changed, it is absolutely impossible that ulcerations could have existed on the penis at any period of the history of the world without sometimes giving rise to inflammation of the inguinal glands; and, accordingly, we find mention made of these appearances in most of the ancient authors; and all we can suppose them to mean, by restricting their origin to a particular period of the sixteenth century, is, that then they first began to be looked upon as direct syphilitic symptoms, even when met with unaccompanied by breach of surface. A syphilitic bubo has been supposed to be of a peculiar character, and easily recognisable by the hand and eye: and so indeed, with many restrictions, it may be admitted to be. It is generally an equal circumscribed swelling of one or more of the glands of one or both of the groins, attended at first with little more than a stiffness of the parts, and some slight uneasiness on taking exercise. Some authors have affirmed that the venereal bubo differs from other glandular enlargements in only affecting one gland: but this is far from being universally the case, especially in those patients of strumous habits, where any irritation will often produce enlargement of the whole chain of glands. A bubo most commonly affects only one side: though this also is far from a general rule—and it more frequently follows ulceration of the internal prepuce, or corona glandis, than those of the skin of the penis, or glans itself. The side affected is generally that nearest the sore, but there are many exceptions to this; it sometimes happens that the femoral glands are the seat of this affection—though this is more common in the case of what is called the sympathetic bubo accompanying a gonorrhœa. Syphilitic buboes are confined to the first order of glands; and it must be understood that they may be met with in the axilla, though, for obvious reasons, the groins are the most usual seat of this symptom. Mr. Hunter says he once saw one of the submaxillary glands enlarged in consequence of a chancre on the lip; whilst Mr. Pearson remarks that, excepting in the groins or axillæ, he never knew an instance of the occurrence of bubo. I should be inclined to believe that their rare occurrence, excepting in the situations above mentioned, is solely owing to the infrequency of syphilitic ulceration in any other part. The venereal bubo is the consequence of the absorption of the syphilitic virus; though it is by no means necessary that these glands should enlarge, or suppurate, since the constitution frequently becomes affected where no bubo has previously existed. They do not often follow the gangrenous ulcer, and, generally speaking, arise in those cases where the progress of the sore is but slow, and certainly have no reference whatever to its size, independently of any other distinctive characteristic mark. Authors detail the histories of patients in whom bubo has been the sole primary symptom, though they acknowledge that these cases are but rare, and that often a very minute examination will detect some slight breach of surface. These primary buboes have been said occasionally to have been followed by secondary symptoms. I will not deny that such an occurrence may take place, but I am convinced that the majority of these enlargements of the inguinal glands, unaccompanied with breach of surface, are totally independent of syphilitic infection; and I should be extremely loath to employ mercury for their cure, because I have uniformly observed them to take place in persons of diseased habit, and in a vascillating state of health; and especially in those constitutions more usually denominated strumous, where any trivial cause will excite irritation in the glandular system, and where mercury, hastily and improvidently administered, gives rise to the most serious evils. I can well recollect the period when all enlarged glands in the groin were doomed to a mercurial treatment, however energetically the patient might declare the impossibility of their originating from the virus of syphilis; and I have lately had so many opportunities of putting the opposite practice to the test of experience, without having met with any cause to repent my so doing, that I should certainly not now think of administering a course of mercurial medicine merely for a bubo. The cases related by authors, in support of the old doctrine, are liable to so many objections, and repeated from one to another without any attempt to examine into their probability, that they cannot, or ought not, now to influence our practice on a point so pregnant with danger to our patients. One observation made by Mr. Hunter, bearing upon this subject, is of some importance. He says, that if buboes, as solitary symptoms, are not the product of venereal absorption, they are generally preceded by fever, and slower in their progress to suppuration than when the contrary is the case. There is some truth in this; but I fear that this ground of distinction is not sufficiently firm to bear us out in our diagnosis upon many occasions, and I therefore must repeat that I should certainly not use mercury in these cases, unless the history was very dis-

tinct, and the patient would not be contented without it.

One caution, however, I wish to impress upon your minds, which is this—never prescribe for a bubo as a solitary symptom, whatever rank of life your patient may be in, without examining the penis, if a male, or the pudenda in the female, if you can possibly avoid it; for patients, under these circumstances, will occasionally trick you if they can, even though it be at the expense of their own health. To obtain the information you require, it may be necessary to use a little tact, or finesse; but it is well bestowed, for the patient will think the more of you—and though he has, perhaps, done all in his power to deceive you, will very likely throw the blame of after consequences upon you if you fail to make the proper examination.

Although the absorbed gland is the central point of irritation, the cellular membrane surrounding it is the seat of suppuration, and when the matter is evacuated, the gland, in an enlarged condition, is usually found in the centre of the abscess. This remark applies generally to all buboes, but they are distinctly divisible into three kinds—those which inflame and suppurate rapidly, those of a more indolent character, and, lastly, those which may be denominated truly scrofulous; and each of these forms of bubo requires a different mode of practice. You will find Mr. Hunter, Swediaur, and other modern writers, relying very much upon the powers of mercury in dispersing these tumours, but their theory is repeatedly belied by the detail of their cases; and whoever begins to practise with this expectation will be grievously disappointed. That mercurial inunction, employed early on the appearance of the primary ulceration, as well as of the bubo, will frequently prevent it from proceeding in its course, I believe to be true; but it is a truth liable to numerous exceptions even in that state of the disease. But when inflammation has once been denoted by the more general diffusion of the swelling, and the presence of absolute pain, I have as often found mercury increase the irritation and hasten their maturation. Professor Assalini's observations confirm this opinion. Some practitioners are fond of applying leeches and evaporating lotions to a bubo: for my own part, I question the propriety of so doing, and I am quite sure that it is commonly useless (I speak of bubo in connexion with some form of primary sore;) and this is no more than might be expected, for how are we to get rid of a glandular enlargement and tendency to the formation of matter, depending upon the irritation of, and absorption from an ulcer, which ulcer is still continuing to produce both those effects? This is contrary to reason, and, I will venture to assert, will not succeed in the vast majority of instances; nay, I have sometimes thought that the irritation of the leeches has actually hastened the progress of the bubo, and I have over and over again seen them applied in vain in private practice. This is a serious evil, for the operation is tedious and troublesome; and a failure in our object is generally productive of great disappointment to the patient. That species of bubo which proceeds rapidly to suppuration is usually found in connexion with a robust state of health, and is more easily overcome than either of the other forms of this affection. There is no occasion, under these circumstances, absolutely to withhold the exhibition of mercury, provided the condition of the ulceration demands its employment; and the best method of treating the bubo is by fomentation and poultice, with absolute rest, in the same way as you would treat abscess in any other part. The matter should be discharged early, as soon as it is fairly formed, before the skin becomes too much inflamed or disorganized; and a free opening with a lancet is, in this case, to be preferred either to permitting it to burst spontaneously, but more especially to the application of the caustic. Little else but a continuance of poultices will be requisite until the ulcer heals, and the extent of the mercurial course need not be influenced by the occurrence of this symptom: when you are satisfied with the healing of the primary sore, and the healthy state of the cicatrix, the circumstance of the glandular suppuration would not induce me to continue its exhibition one day longer. The chronic or indolent bubo requires much more circumspection in all respects, but more particularly as far as regards mercurial treatment, than the inflammatory or phlegmonous bubo: in these cases the swelling is often more diffused and larger than in the simple inflammatory bubo; the surgeon and patient are often flattered by a promise of the dispersion of the swelling, which again resumes its progress; the skin becomes discoloured slowly, but to a considerable extent; the colour is not the bright scarlet of the former description of swelling, but of a dull deep red; the fluctuation of matter becomes perceptible only by slow degrees; and this indolent condition will often remain for many days, and will require generally the interference of the surgeon, for if permitted to break, the skin having become extensively diseased will commonly ulcerate largely, or sometimes even slough extensively, giving rise to a sore formidable for its size, often taking on the true phagedenic character, and healing with the utmost difficulty. I have known fifteen months consumed in endeavouring to cicatrize a sore in this condition. The causes of this particular kind of suppuration are to be sought for either in the peculiar habit of body of the patient or in the wrong action of mercury on the system: whenever, therefore, in the progress of a venereal ulceration, which you are treating by mercury, a bubo occurs answering to the above description, unattended with much pain, making but little progress from day to day, but at length showing a disposition to suppurate, with much diseased skin, it is more than probable that mercury has either been pushed too far or has excited its own specific fever. Whenever you per-

ceive this condition of the gland, inquire minutely into the patient's general state of health: he will probably say he is very well, but when closely questioned you will find that the sleep is not sound, there is headach, an irritable pulse, occasional slight chills and heats, so trifling as perhaps not to have excited his attention at first, but which are evidence that should induce you to change your line of practice at once;—abstain from mercury, give light tonics, with the nitric or sulphuric acids, let the patient take passive exercise in the open air, if his local disease will permit him so to do, or let him go if possible into the country.

The bubo, in all probability, will require to be opened, for the matter has rather a disposition to spread and burrow under the skin than to come fairly to the surface; and as the skin is usually in a state of disease, and can scarcely be expected to recover, it is better, I think, to make an opening by destroying a portion of it with the caustic potash. This should be done at once with the hand, not in the usual way, by putting it upon the part and suffering it to remain there, since the opening should not be made large, nor should it be permitted to extend in depth below the skin. It appears to me that the stimulus of the caustic often operates beneficially on the enlarged glands themselves, and that they rapidly lessen when treated in this manner. These are the cases which lead to such deplorable consequences when mercury is pushed in defiance to all the dictates of common sense, where ulceration extends rapidly, and is mistaken for the continued effect of the syphilitic virus; and at length the patient falls a victim either to the extent of the discharge or some consecutive hemorrhage of the larger blood-vessels of the part; and never, therefore, forget to pause in the exhibition of that mineral when you find the skin giving way, ulceration spreading rapidly, and the health declining from hour to hour. This is a condition that I have witnessed too often, especially in public institutions, where numbers are crowded together, and where, if an ulcer becomes phagedenic, it requires a long time, and much perseverance in the employment of both proper medicine and diet, to alter this obstinate condition of the parts. The treatment of these tremendous sores, when they have assumed the phagedenic character, will be considered in another place.

The third description of bubo which I have to describe is the scrofulous: it is rather an enlargement of the whole chain, or at least of several of the inguinal glands; these proceed to imperfect suppuration, as scrofulous enlargements in other parts are wont to do, and demand much attention and nicety of discrimination in practice. Here the primary sore (for you will understand that I speak of these buboes always in connexion with primary sore) may require a mercurial treatment, perhaps; but if this condition of the glands exist, a full and free course of mercury is inadmissible. Here we must preserve, if possible, the tone of the system; and mercury, though it ought to be exhibited, perhaps, for the purpose of averting constitutional affections, must be prescribed *alteratively* only; the sarsaparilla should be given with it daily, in the form of decoction, to the amount of a pint in the day; passive exercise must be prescribed, and the local application of blisters will often be productive of much good. If suppuration take place, it often shows itself in two or three small spots on the summit of as many enlarged glands, and I have found it generally the best method to puncture these simply with a lancet. They seldom ulcerate under this mode of treatment, and generally heal well, though very tediously, under the use of the common poultice. Occasionally, when indurations remain, the mercurial plaster will succeed in removing it entirely. When, after a bubo has either broken spontaneously or has been opened, sinuses form, a very troublesome, but by no means an uncommon event, it is the quickest and best method to lay them open at once; any other mode of managing them is productive of so much waste of time, and after all so commonly unsuccessful, that there can be no hesitation as to the propriety of so doing; and unless there be much diseased skin connected with them, the knife is the readiest and even the least painful mode of proceeding. When a bubo has been fairly opened, and the portion of skin devoted to destruction has ulcerated away, there is little difficulty, in general, in healing the part: to keep down exuberant granulations, and to touch the edges with the lunar caustic, is all that will be required. The Bates' camphorated water, the ointment of red precipitate, or that composed of the oxyde of zinc, form excellent applications to the part, and will generally lead, in the space of three or four weeks, to the cicatrization of the sore. But, after all, a bubo that has suppurated is a very formidable symptom, for it takes a long period to go through its different stages, and the patient generally counts the days with great anxiety; however, it must be your business previously to acquaint him with the very tedious nature of the complaint, and not to promise him too speedy an escape from his troubles, even when suppuration is established, for the subsequent progress of the sore is very uncertain and capricious. In every case where mercury has been or is exhibiting for the cure of the primary ulcerations, and the system is under its influence, and the bubo, after it has suppurated, begins to spread or to ulcerate rapidly, do not, upon any consideration, attempt to pursue the exhibition of that medicine: your only hope of remedying this condition of the system is by the administration of sarsaparilla, or by other tonics; by good air and passive exercise, a residence perhaps at the sea-side, and such local means as the apparent condition of the bubo shall demand. If irritable, with a thin and profuse discharge, the hemlock poultice will often be productive of much good. A weak solution of nitrous acid will sometimes produce a healthy condi-

tion of the parts, but ointments are seldom advisable in this condition of a sore, however compounded; the greasy nature of the application appears to do harm, and whatever is applied had better be in the form of a liquid, covered by poultice. I shall have much more to say upon this subject when I come to treat of phagedena.

Another local affection, if not exactly a primary one at least the consequence of them, is the formation of warts. These were wont formerly to be called venereal warts, and I remember the time when a good solid course of mercury for five or six weeks was always prescribed for their cure. The appearance of warts is very various; but we can distinctly recognise that kind which the ancients denominated thymus, from its supposed resemblance to the tops of the herb thyme: sometimes this is met with all round the corona glandis, sometimes only growing from the internal prepuce. Warts are, again, occasionally single, with a small slender peduncle or stalk; at others they are like little pyramids, with a broad base; but, in short, their various appearances are almost endless: however, our means of overcoming them are scarcely less so, and almost every practitioner has some favourite application for their destruction. They may be snipped off with scissors, or tied with a fine silk; they may be taken off by caustic, or destroyed by the powder of savine, by the liq. plumbi acetatis undiluted, or by the tinctura ferri muriatis, or by a strong solution of oxymuriate of mercury; but the extent, description, and mode of attachment of these excrescences would be my guide in preferring one or other of these remedies—for example, if the wart is large, with a small neck, I should cut it off with the scissors, and touch the cut surface with the lunar caustic: this will have a double effect—it will stop the bleeding and prevent the growth of the wart, for they are all inclined to sprout again. If the mass was of the fungoid kind, I should, on the contrary, dip a piece of lint in the tinct. ferri muriatis, and lay it upon the part, or sprinkle it with the powder of savine; or if it was circumscribed, but still of a soft nature, perhaps I should prefer including it within a ligature; but whenever the surface from which the warts have grown is extensive, it will be necessary to wash the part for some considerable time afterwards with a strong solution of the sulphate of alumine or zinc, or of the oxymuriate of mercury, which will tend to prevent their reappearance.

Mr. Jesse Foot believes that there is oftentimes a connexion between the formation of warts and a diseased condition of the urethra. I am not quite clear about this, but I have, upon more than one occasion, been inclined to believe that has been the case; and whenever you find them very troublesome, and growing again in spite of all your endeavours to destroy them, it will not be amiss to turn your attention to the state of the urethra.

In connexion with this part of my subject, I must here say a few words relative to those symptoms formerly arranged among secondary syphilitic affections, but which were undoubtedly known to the ancients, who cured them without difficulty, and by much the same means that are recommended by recent authors—I mean by those who have abandoned the old plan of putting their patients through a mercurial course for their destruction. These symptoms are rhagades, or fissures about the anus, fici, condylomata, porri, mariscæ, &c. The former of these appearances would seem to be connected rather with a certain train of cutaneous symptoms wholly unallied to syphilis, and are often met with, according to Mr. Hunter's commentator (Dr. Adams,) in warm climates. Swediaur believes that the fici and condylomata, or mariscæ, have sometimes derived their origin from the indulgence of an unnatural propensity: I fear there is much truth in this observation. I have had two or three opportunities of witnessing these appearances under circumstances of great suspicion; and this was a very general belief among the ancients, as is evident from the writings of Juvenal, Horace, Martial, and Lucretius. Nevertheless I am quite confident that mercury, excepting perhaps as an alterative, is not requisite for the cure of these affections.

The minute distinctions made by authors between the fici, condylomata, thymus, and mariscæ, are not very intelligible to us in these days: they are more or less of the nature of warts, only distinguished by their greater or less degree of softness or hardness, and generally yield a fœtid ichorous discharge. They are to be got rid of by escharotic applications, or by a strong solution of the oxymuriate of mercury, which generally operates upon them a very rapid change. Occasionally, the condyloma and ficus may be cut off with the knife, or included in a ligature. The cure of rhagades will generally be effected by the use of the ung. hydrargyri nitratis, or the red oxyde of mercury. Alterative doses of calomel, in the form of Plummer's pill, together with the decoction of sarsaparilla, may likewise be beneficially exhibited; but I would not recommend the regular mercurial course for the removal of these symptoms, since (though occasionally following syphilitic complaints) they do not appear to be essential symptoms of the disease, but rather proving a peculiar constitutional taint called into action by it; and it is curious to observe how Swediaur struggles between the old doctrine and the belief of their separate origin from syphilis, which experience has shown him—for in one paragraph he observes that they only need local remedies; again, in another, he tells us that, if syphilitic, a thorough mercurial course must be prescribed: but he fails to point out to us any mark by which we are to distinguish one kind from the other, and well he might, for no such distinctions exist.

Even Astruc himself, when describing these

symptoms, though no man has a greater confidence in the universal powers of mercury, after recommending a complete course of that medicine, says, if there should be no suspicion of their being the consequences of syphilis, or at least if they be only the consequence of the recent and local action of the virus which has not extended beyond the part, it may be as well to spare the patient the trouble of a course, but still to employ that remedy in a lighter manner, until the symptom is removed. In his account of cristæ, mariscæ, and rhagades, the same vacillating kind of opinion is given, and he observes that, where there is a suspicion of a venereal taint, a full exhibition of mercury must be premised; but this he does not expect to be effectual in removing the symptoms, which he afterwards begins to attack by local remedies, and which are not different from those I have mentioned above—that is to say, in principle at least: for they all turn upon the destruction of the parts by escharotic applications, or by cutting instruments, where the form and situation of the excrescence give that mode of operating a preference. I have now gone through the local symptoms arising from the application of the syphilitic virus to the parts of generation, as well as the first step, as it were, to the contamination of the system—that is, a bubo; and endeavoured to show you the distinctions between the various forms of primary ulceration, together with the general and particular mode of treatment adapted to each. The same distinctions I have also extended to the various forms which glandular enlargements assume under different circumstances in the health and constitution of the patient; but I am well aware that what I have said cannot possibly include all the shades and varieties which may be met with in a long and extensive practice: nevertheless, I hope enough has been said to enable you to notice those points of difference in each case which will guide you in the adoption of a particular line of practice, adapted to the condition of constitution or local disease you have to contend with; and that you will not suppose that every sore, because it may be of a syphilitic character, must be subjected to precisely the same quantity of mercury, to precisely the same local treatment, as you would be too apt to suppose from the perusal of many works upon this disease; and the same remarks also apply still more forcibly, if possible, to the treatment of a bubo, which, from a very trivial and simple symptom, may be converted into a formidable wound—may even implicate the life of the patient, if, under such circumstances as I have attempted to explain, you persist in the use of mercury, or do not moderate its action.

[The above concludes Mr. Bacot's Essays on *Primary* Syphilis. There remain yet a few essays on the *Secondary* form of the disease, which we shall continue in subsequent numbers.—*Ed.*]

From the Edinburgh Medical and Surgical Journal.

OBSERVATIONS ON THE MECHANISM OF THE BILIARY SYSTEM.

By Chas. Wilson, M. D., Licentiate of the Royal College of Surgeons, &c., one of the Physicians to the Kelso Dispensary.

The parts which are to be considered as immediately essential to what may be termed the mechanism of the biliary system are, the *tubuli biliferi*, the hepatic duct, the gall-bladder with its duct, and the *ductus communis;* and the questions which arise regarding them are, 1st, by what means the bile is propelled through the various canals? 2d, how is it made to retrograde into the gall-cyst at a certain period of its course? and 3d, by what agency it is again poured forth in considerable quantity, when its presence is required in the duodenum or other intestines, to assist in the process of digestion? Whatever takes place in the liver before the appearance of the bile in the *tubuli* cannot possibly be referred to any principle merely mechanical, and indeed the process is so completely concealed from us, that, in the present state of knowledge, it cannot be explained upon any principle whatever, physiologists having generally chosen to designate it in such terms as may be construed into a tacit confession of ignorance. Of the parts now mentioned, therefore, and the questions proposed with regard to them, the second principally claims attention; and, if I allude to the others, it is only in order that my investigation of the subject may be more complete.

It would be an easy answer to the first question were we to admit with some anatomists, in the structure of the ducts and of the gall-bladder, an inherent muscular power, which performs the office of propelling the contained fluid; but unfortunately the actual inspection of these parts does not give any countenance to such an opinion. Even in the larger animals, the ox for example, where the magnitude of the parts renders their examination a work of comparative facility, I have not been able, upon the most careful dissection, repeated in various ways, and with the aid also of a lens of considerable magnifying powers, to discover any appearance of muscular fibres. Perhaps a careless observer may mistake, for an appearance of this nature, the minute nerves, and the vessels when void of blood, which are ramified between the outer layers of the cellular coat; or still more probably, those slight folds which are seen upon this coat when stretched by the forceps or otherwise, but which are evidently caused by the degree of tension employed, and disappear so soon as the membrane is allowed to regain its proper situation. In this manner certainly may be produced an appearance somewhat similar to what Meckel describes, (Manual of Anatomy, Vol. iii. §2224;—he does not tell us whether from his own immediate observations or not,) as "fibres, for the most part of a whitish colour, running in different directions, in some instances very analogous to those of the muscular coat of the intestines, but which

cannot be considered as constituting a distinct layer,"—a description which I have not been able to verify in any other way. Meckel, however, does not seem to wish it to be considered that these fibres, if they truly exist, are in reality possessed of a power distictly muscular; nor has he, or any other anatomist, proved that they possess contractile force, susceptible of being called into action by the application of *stimuli*, in a manner similar to that displayed by other parts of muscular structure; or exhibited this cyst, or the ducts connected with it, in any other than a perfect passive state. I am not aware of any observation or experiment which tends to prove in them a power of diminishing the capacity of their cavities by the agency of any contractile force proper to and inherent in their parietes.

It becomes necessary, therefore, to look for another cause of the motion of the fluid in these vessels; and this perhaps may be found in the conjoined agency of the capillary attraction in the extreme *ramuli*, the various motions of the neighbouring organs, the pulsations of the arteries which accompany the ducts throughout their course, and form with them a remarkable series of *fasciculi;* and above all, of that "*vis a tergo*" which is the unavoidable consequence of the act of secretion itself. It is not understood that the *vis a tergo* here alluded to derives its origin directly from the action of the heart through the hepatic arteries; for the power thus acquired must be supposed to be exhausted in the remote branches of these vessels, which finally dwindle in the *acini* of the liver, as elsewhere, into a minuteness so extreme as to elude inspection. But the very formation of each successive particle of the secreted substance, displacing that which was secreted immediately before it, must give rise to a power perfectly adequate for the purpose required, very little force being demanded for the propulsion of a fluid, which, like the bile, proceeds from a series of smaller vessels into larger.

Admitting the efficacy of these means for maintaining the direct course of the bile in the ducts, we are as far as ever from accounting for its retrograde motion into the gall-cyst,—a part of the physiology of the liver which has not yet been rationally explained, and with regard to which some of the older writers indulged in the gratuitous supposition that no such retrogression actually took place, but that there existed a number of ducts, (hepato-cystic,) forming a direct communication between the liver and gall-bladder, by which the latter received its supply of bile,—a structure which indeed occurs in some of the lower animals, as in the hare, dog, ox, and sheep, and also in fishes, reptiles, and birds, but which has never been observed in man. Winslow mentions (Anat. Vol. ii. p. 164,) that he has observed at the opening of the hepatic duct into the *ductus communis*, a small, loose, and valvular membrane, which he considers may have some influence in directing the course of the bile; but it is difficult to conceive how the presence of such a valve in this particular situation should not rather act as an obstacle to the passage of the bile into the cystic duct. It was probably not in this way, therefore, that Winslow imagined its influence to be exerted, but rather in the direct propulsion of the bile towards the duodenum. It must be in the structure of the *ductis communis* itself, then, that we are to look for the explanation of the fact in question; and I think that we shall here discover an instance of an adaptation of parts to certain purposes, almost as remarkable for simplicity and fitness as that which occurs in any other organ of the human body.

The *ductus communis* is generally about four inches in length, and towards its duodenal extremity assumes a somewhat conical form, contracting itself considerably in diameter as it passes into the gut, where consequently it terminates by an orifice narrower than the body of the canal. Bichat (Anat. Descript. Tome 5me, p. 105,) mentions the existence of a valvular membrane at this orifice, but he does not enter farther into any description of its form; nor does he at all dwell upon the probable nature of the office which it may be calculated to fulfil. Cloquet also, (Dict. de Med. Tome 9me, cap. Foie,) confines himself to merely noticing the existence of a membranous fold in the same situation. The following result of some observations made by myself on this subject, I offer, as furnishing a more satisfactory explanation than any which I have yet seen.

Just at the point where the pancreatic duct joins the *ductus communis*, there may be observed two folds continuous with the orifice of the former;—the one superior, and to the inside, short, and terminating at the orifice of the *ductus communis;* and the other inferior, and on the outside, (more remote, that is to say, from the median line,) longer, and proceeding obliquely round nearly the whole of the gall-duct, and at length terminating also at the orifice of that duct. These folds may be easily demonstrated by means of the blowpipe, and their disposition will be more accurately ascertained if a lens of moderate powers be employed. They have their unattached margin pointed upwards, in a direction opposite to that of the course of the bile, and appear to be composed of a projection of the mucous and cellular coats of the canal. From a careful examination of the parts thus disposed, in different subjects, it appears to me that they are fitted to perform the office of a nearly perfect valve, which, from its peculiar situation between the *ductus communis* and the pancreatic duct, is capable of being, to a certain extent, applied to either, as circumstances may direct; and that its action as a valve is in part regulated, *ex necessitate*, by the condition at any given time of the *vis a tergo* in either duct.

Supposing, for example, what from the experiments as well of the older physiologists, (Diemerbroeck, Anat. Lib. i. p. 129, &c.) as of those of modern date, we have a right to assume that the secretion from both the pancreas and liver is unintermitting, and that we begin to examine its progress at the time when

the gall-bladder has just been emptied of its contents, it will result from what we have stated, that, as the pancreas possesses no cyst, its fluid must proceed continually forwards, and will tend to throw the valvular membrane outwards, so as to make it project into the gall-duct; while the bile finding a partial resistance, and its *vis a tergo* being unable to concentrate itself upon this single point, owing to the presence of the gall-cyst, will pass only in small part into the duodenum, the surplus necessarily escaping into the cyst. Here its passage upwards is, on the other hand, favoured by the particular disposition of the inner membrane, which, in the cystic duct, and towards the neck of the cyst, is arranged into folds, presenting their concavity upwards, and acting doubtless upon the contained fluid in a manner certainly less perfect, but somewhat resembling the valves of the venous system; that is to say, less perfect, because they may be supposed to favour slightly the ascent of the bile, without being able to offer any great obstacle to its regurgitating afterwards through the same passage, should a sufficient force be employed in an opposite direction. It will be only after the cyst is full, then, that the whole of the *vis* acting on the orifice will produce a free passage for the bile into the gut; while the valve, from its connexion with the opposite side of the *ductus communis*, can never be thrown so completely towards the orifice of the pancreatic as to obstruct the course of its fluid, even supposing that the change effected at this stage were any thing more than a mere equalization of those powers, by which the fluid is propelled through the orifice of either canal.*

Such seems to me to be the manner in which we are authorized, by the structure of the parts, to account for the regurgitation of the bile into the gall-cyst, in a direction so singularly opposite to its original one in the hepatic duct; but the following simple illustration, which I have had repeated opportunities of verifying, may perhaps tend farther to prove the existence at the orifice of the duct of such a resistance as has been alluded to, independent even of the assistance which we have supposed to be always necessarily afforded by the presence of the pancreatic juice. The gall-bladder and duodenum having been previously emptied of their contents, a tube was passed into the hepatic duct, and pushed some way beyond its point of junction with the cystic, and air was then gently introduced by means of it into the *ductus communis*, when it was found that, while the air escaped only in very small quantity into the duodenum, the gall-bladder was easily and speedily distended, and it was not till its distention was completed that that of the duodenum could be said to have commenced,—thus proving that regurgitation from the duct into the gall-bladder is of more easy accomplishment, even under unfavourable circumstances, than any passage from that duct into the gut.

In the foregoing remarks, I have hitherto purposely avoided alluding to those cases in which the pancreatic and gall-ducts open into the duodenum by separate though contiguous orifices, because such instances are comparatively rare, and because it is probable that the difference of structure consists only in the accretion of the segments of the before described valve, by which means a membranous septum is prolonged for a little way between the two canals, leaving the essential parts of the structure the same, and liable to be influenced by the same causes as in the more common examples.

If the preceding considerations are adequate to account for the regurgitation of the bile into the gall-bladder, it only remains for me to answer the third question proposed, to consider, viz. by what means the cyst becomes again emptied of its contents. This has generally, and I think with justice, (the muscularity of the cyst remaining unestablished,) been attributed to the pressure of the adjoining viscera in their distended state. When the stomach becomes filled with food, and the subsequent distention of the *duodenum* commences, a degree of pressure must necessarily be exercised upon the neighbouring viscera, and, among the rest, upon the gall-bladder, which, from its situation at the upper part, and near the parietes of the abdomen, where the concavity of the ribs and the liver oppose an unyielding surface, is well placed for undergoing the action of any compressing force. By this means an additional power is acquired, and the bile is thus opportunely poured out in considerable quantity just at that moment when its presence becomes necessary in the intestine; the whole of the process affording an instance of a wise yet simple contrivance of nature, by which she modifies the supply afforded according to the necessity and extent of the demand. It is denied by Adelon (Physiol. de l'Homme, Tome 2me,) that these *viscera* are in sufficiently close contact to produce such an effect; but that in the living subject they actually touch one another is, I think, proved by the often remarked yellow tinge which the pyloric extremity of the *duodenum* receives from the bile, and more especially from the circumstance, that adhesions between the gall-bladder even in its ordinary size, and the py-

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* The membranous folds not joining so as to form a perfect valve, and this valve opening upwards, are circumstances which render it evident that the passage of certain bodies from the duodenum into the duct cannot be a matter of much difficulty. We have thus some curious instances recorded by Guersent, Laennec, and others, in which intestinal worms (*Ascarides lumbricoides*) have been found within the ducts and gall-bladder, into which they must have passed from the duodenum. It is well known, however, that certain species of worms are sometimes generated in these cavities. In the gall-bladder of an ox, now lying before me, I have met with an example of the genus *Filaria*, measuring fully four inches in length, and of about the thickness of a hog's bristle.

lorus, are frequently observed. Surely neither of these effects could be easily produced, unless the parts were placed in the closest contact.

We have, on the other hand, a marked instance of the effect produced by a state of the bowels, opposite to that of repletion, afforded us by the observation, that, in animals which have been destroyed after having fasted for a long time, the gall-bladder and biliary ducts are always found completely gorged with bile. Farther, that the gall-bladder may be emptied by pressure *generally* employed, is demonstrated by an observation of M. Magendie, (Elem. de Physiol. Tome 2me,) who tells us, that, in the act of vomiting, during which, from the very powerful contractions of the diaphragm and abdominal muscles, great compressing force must be employed, the bile is readily expelled from the cyst. "I have often," he says, "found it empty in animals which have perished from the effects of an emetic poison." Bertin assures us also that he has seen ruptures of this cyst produced by the act of vomiting, when excited intentionally for the purpose of removing gall-stones impacted in the duct. I am not in possession of any facts which tend directly to illustrate the part which the structure before described may perform in the pathology of the biliary system; but perhaps it is in lesions of its functions that we are to look for the explanation of some of those morbid appearances which cannot be easily traced to any evident affection of the liver itself, and for which no sufficient cause can be assigned by the discovery after death of structural disease in that viscus. (Marsh, Dublin Hospital Reports, Vol. iii.) Thus, in certain cases of fever, of gastro-enteritic affections, and of what has been termed *peritonitis biliosâ*, &c. we have frequently a jaundiced colour of the skin, giving probable evidence of an absorption of bile, without there being found any appearance, on dissection, of a morbid condition of the gland. But it can readily be conceived that the inflammation of the mucous membrane of the intestines, which constitutes one of these diseases, and is so often an accompaniment of the others, may propagate itself towards the valvular membrane within the orifice of the duct, from which cause may ensue such an engorgement of its tissues, or derangement of its functions, as would be most likely to give rise to a stagnatin of bile in the ducts and cyst, and the consequent absorption of it, or of one or other of its principles, into the general system. I do not refer to those rather rare instances, in which the whole of the duct and cyst have been either primarily or secondarily affected with inflammation, because then of course the morbid state becomes a matter of more easy detection, as in the instances produced by Broussais, Rochoux, Andral, &c. or in the remarkable one given by Frank, (*Interpret. Clinic. Pars 1ma,*) where the inflammation was so violent as to lead to gangrene.

A consideration of the preceding principles, should their correctness be admitted, may, I think, be employed also, to explain several other circumstances connected with the pathology of the liver, for which at present improbable or uncertain causes are assigned; but, in the absence of direct proofs, I must abstain from all present allusion to them. I may add, however, by way of conclusion, that we ought probably to look to the particular structure before described, for a reason why gall-stones,* after having passed through the narrower cystic or hepatic canals, should remain sometimes arrested in the common duct. Some authors have chosen to explain this fact, by supposing the existence of spasm of the canal; but this is an assumption which the structure of the parts appears to me not to warrant.

From the London Medical Gazette.

DR. BLUNDELL ON TRANSFUSION.

The work of Mr. Ashwell† has appended to it Dr. Blundell's paper "On the Surgery of the Abdomen," and "Some Remarks on the Operation of Transfusion." The former relates chiefly to extirpation of the uterus and ovaries, a subject on which we have frequently had occasion to express our opinion, while we have made our readers acquainted with the various cases as they occurred. We shall now, therefore, confine ourselves to a *digest* of the most important parts of the second paper, giving the matter as nearly in the author's words as may be consistent with the necessary condensation.

Of the kinds of Blood proper for the operation of Transfusion when performed on the human body.

When the blood of one genus of animals is added, in small quantities, to that of another genus by transfusion, we have reason to believe that no dangerous consequences will ensue. Now, if further experiments should confirm this principle, we may hope to find that the blood of animals may be safely thrown into the human vessels in small quantities daily, for the purposes of nourishment.

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* In a case observed by M. Amussat, and quoted by Ferrus (Dict. de Med. cap. Foie,) the common duct was found obstructed by a large calculus, which had given rise to a dilatation of the gall-bladder, and of all the branches of the hepatic duct, the parietes of which appeared to him to be evidently muscular. I should have noticed this in a former part of these observations, were it only to state, that it cannot be just to admit any attempt to illustrate the structure of a part when sound, by its appearance when in a morbid condition. Besides, it is probable that in this example mere hypertrophy of the mucous tissue was mistaken for an appearance of muscularity.

† A Practical Treatise on Parturition, comprising the attendant circumstances and Diseases of the Pregnant and Puerperal states.

Although, however, the blood of one genus of animals may, perhaps, without fatal consequences, be sparingly mixed with large quantities of the blood of another genus, all the facts which have come to Dr. Blundell's knowledge go to prove that if an animal be drained of the blood in its larger vessels, and replenished with blood derived indifferently from another genus, great danger, and in general death itself, will ensue.

Provided the blood be derived from an animal of the same species with that which receives it, it seems to matter but little whether it be arterial or venous. To ascertain this and other points, Dr. B. performed various experiments, from which he concludes—

1st. That in transfusion venous blood may be successfully used, although, perhaps, arterial blood is preferable.

2dly. That an animal may be saved from the death of hemorrhagy by the transfusion of a much smaller quantity of blood than that which it has lost.

3dly. That the blood of one genus of animals cannot be indifferently substituted, in large quantities, with impunity, for that of another genus; and, therefore, that if an operation be performed upon the human body, human blood only should be employed, until some other blood be found which is equally congenial to the vessels.

In performing transfusion there can be no doubt that blood ought to be transmitted by tubule merely, when this method is practicable; but as we should probably meet with obstructions in operating in this way on the human body, Dr. Blundell made experiments with a view of ascertaining whether blood may not be propelled by a syringe, without becoming unfit for the purposes of life.

The following are the inferences drawn:—

1st. That blood, although it have passed through the syringe, and repeatedly, is still capable of supporting the life and health of the body.

2dly. That although blood which has passed the syringe retain its fitness for the animal purpose, it probably becomes deteriorated by this operation, especially if it lie for a few seconds out of the vessels, and be slightly inspissated in consequence.

3dly. That the deteriorated blood, after it has been thrown into the vessels, undergoes a sanative process, by which it again becomes thoroughly congenial to the functions of the animal; for most of the dogs on which experiments were performed, though languid for some two or three days subsequently to the operation, became very lively and well a few days afterwards.

The mode of transfusion from the arteries of one man to the veins of another is next spoken of; but it is so very seldom that such an operation can be practised, that we omit the details as superfluous, and proceed to

The Transfusion of Venous Blood by means of the Impellor.

In operating with this instrument, the vice of the apparatus is to be very firmly screwed into the back of the chair, at its outside. By means of the stem which projects from its apex, the cup is to be fixed erect in the gripe of the vice, and the large outer cup, containing the impelling part of the instrument, is to be filled with tepid (96°) water, so that the whole of this part of the apparatus, inclusive of the syringe, may be covered in completely by the water. The apparatus being thus far prepared, the inner cup is to be put on, care being taken to fit the tube which projects below from the apex of this inner cup, to the corresponding tube which springs up from the cylinder with which the syringe is connected, and which lies in the bottom of the larger cup; because, if the exact apposition of one tube to the other be neglected, a difficulty may needlessly arise in putting the inner cup into its place, in consequence of the two tubes interfering in an obstructive manner with each other. Some water is then to be poured into the inner cup and pumped briskly through the instrument, so that the air may be expelled thoroughly, the water taking its place; and the extremity of the flexible tube which springs from the instrument is, towards the end of the operation, to be bent down into water contained in a tumbler, the pumping being continued, and this with a view of ascertaining, by the appearance of bubbles, whether there be any fissure at which air enters. The apparatus being thus prepared, the operator with his lancet may lay bare a vein on the fore-arm of the patient, to the extent of an inch at least, taking care to cut down completely through the cellular web, and then make a longitudinal incision at least a line in length, and large enough to allow of the ready entrance of the venous tubule to be introduced to the extent of two or three lines thoroughly, but with the utmost gentleness, with its extremity towards the heart. A ligature should not be used. The tubule should be retained in its place by the finger of the assistant who holds the arm. The orifice of the tubule should not have a cutting edge.

After the apparatus has been fitted together, the person who is to supply the blood takes his seat on the chair, his arm is opened by the lancet as in ordinary venesection, and the blood, instead of being received into a basin in the usual manner, is directed into the cup of the transfusing instrument, and by the play of the syringe impelled direct into the vein of the patient, without being suffered at any time to accumulate largely in the apex of the cup. As the object of the syringe is merely to give impulse, it ought not to be worked by long strokes, but by a short and sharp movement, care being taken that the plug be every time pushed home, so as to bear down upon the nozzle plate, and prevent any accumulation in the barrel of the instrument.

For supplying blood, men are preferable to women, as they bleed more freely and are less liable to faint. If blood can be procured from the arms of two persons at once, it would sometimes perhaps be desirable. Stimuli suf-

ficient to exhilarate and rouse the circulation may be advantageously given to those who are to furnish the blood before the operation is begun.

The minute dexterity required in managing this instrument may be easily acquired by any person who will accustom himself to pump blood, or even water, through it; and those who are frequently performing the operation of venesection must have many opportunities of doing this. Laundy, of St. Thomas's-street, Southwark, now manufactures these instruments.

Of Transfusion by the Syringe.

Should it be found hereafter, by numerous decisive experiments, that human blood may lie in the cup for several seconds, without becoming thereby unfit for the vital purposes, there is yet another mode in which transfusion may be accomplished. In this method of operating a good syringe is required, capable of containing two or three ounces, and furnished with a pipe for the vein (like that used in the former instrument,) about two inches long, and made to fit by plugging, and a semi-rotatory movement, into the nozzle of the syringe.

The blood is to be drawn into a conical vessel (for example a tumbler,) and while flowing into this vessel, held by an assistant, it is to be absorbed into the syringe. When charged, the syringe is to be held with its tubular nozzle upwards, and the piston is to be pushed slowly onward till the blood begins to issue, in order that the air, which, from its greater specific levity, will rise to the upper part of the instrument, may be thoroughly expelled. The syringe, together with the tubule springing from it, now charged with blood only, is to be slid into the vein of the patient, properly laid open for the purpose, and without delay or hurry the blood is to be injected in an equable stream; the operation being repeated as often as the quantity of the blood to be injected may require: the syringe being of a known capacity will measure the blood.

We have given these details that any of our readers may be able to set about the operation methodically, should they have occasion to practise it. The extent to which it is capable of preserving human life we regard as still *sub-judice;* but some very interesting cases have already been published, particularly by Mr. Waller, to whom, as well as to Dr. Blundell, the profession is indebted for the zeal they have displayed in this branch of obstetric surgery.

From the Medico-Chirurgical Review.

INFLUENCE OF THE BRAIN AND NERVOUS SYSTEM IN THE PRODUCTION OF INFLAMMATION. By Dr. Malden, of Worcester.

We have, on many occasions, seized opportunities of opposing the partially fashionable current which certain pathological investigations have lately taken, in respect to the vascular system. The brain and nerves are in danger of being turned out of doors—and we expect soon to find fevers as easily tested by re-agents as oxalic or prussic acid! The nervous system is now voted to have nothing to do with the phenomena of inflammation—and when local inflammation leads to constitutional or visceral disorder, it is not at all through the medium of the brain and nerves, but through the instrumentality of "morbid secretions" contaminating the mass of blood, or by extension of the local inflammation along the veins to the viscus affected. In a very sensible paper recently published by Dr. Malden, in our "Midland" cotemporary, a very different and a much more correct view is taken of these things. We are therefore tempted to extract a passage which, in itself, conveys some just notions of disease, and may lead the reader to peruse the original article.

"The more readily sensorial action follows impressions made upon parts, the more readily will inflammation be produced in them, upon the application of its exciting causes.

"The term pain ought to be employed in pathology, as a generic term, including all uneasy sensations referred to a part. Nerves must be considered as simply impressible. When a part is stimulated by the application of any irritant, mechanical or chemical, the sensorial action follows, and the effect produced by it is slight or severe, according to the nature of the stimulus, the mode of its application, or the state of the sensorium.

"It seems probable that the catenated actions which succeed, and which, in their progress, constitute the different grades of inflammation, are reflex sensorial actions; or the result of a motive impulse, conveyed by the nerves from the sensorium, to the part affected, or its vicinity.

"The two extremes of the arterial system, the heart and the capillaries, agree in the following particulars.

"They are both endowed with a contractility which acts independently of the sensorium, upon the application of stimuli; but they may both be powerfully affected by sensorial action.

"The action of the heart is modified even in health, by every mental emotion; and anger, shame, and other passions, display, beyond all doubt, as marked an influence on the capillaries.

"A temporary change then, in the state of the brain itself, follows the application of a stimulus to a part, which is followed by a reflex motive impulse conveyed by the nerves. This impulse is not confined to the point upon which the impression has been made, but is communicated to the arteries surrounding it, increasing the afflux of blood to them, and by injecting and distending with red globules, minute capillary branches, which before contained only transparent and colourless serum, either renders them distinctly visible, or, where they are numerous and crowded, pro-

duces a diffused redness or blush of greater or less extent.

Thus, simple determination of blood, as it has been called, is effected by increasing the quantity contained in a certain set of vessels. —'Ubi irritatio ibi fluxus.'

"*Experiment.*—With the point of a needle, gently scratch or pick the back part of the wrist or hand, two or three times, until a slight smarting sensation be produced; in a few seconds a blush will be observed, (not commencing at the stimulated part, and gradually spreading from it) but commencing in several distinct points for some distance round it at the same time, and progressively blending into one blush. These phenomena are easily observed by the naked eye, but, with the assistance of a magnifying glass of slight power, the demonstration is more conclusive and satisfactory.

"This view of the part the sensorium takes in establishing local determinations in the neighbourhood of a stimulated point, affords the only explanation of the apparently arbitrary manner in which inflammation is occasionally fixed upon seats to which no cognizable stimulus has been previously applied. The same sensorial change which is produced by the application of a stimulus to any remote part, would, if it should occur independently of the application of such a stimulus, have a tendency to communicate the same motive impulse to the vessels in the neighbourhood of the part, as if a stimulus had been there applied.

"That local determinations can take place from sensorial changes only, is proved from the phenomena of blushing as the consequence of mental emotion.

"There is a term employed by medical writers, which, in my opinion, is indicative merely of increased impressibility of the nervous system—*Mobility*.

"Individuals of delicate structure, or who have been debilitated by dissipation, disease, study, sedentary habits, the puerperal state, or other causes, have this *mobility*, and are, therefore, hourly subject to some new combition of symptoms, till the constitution be invigorated, and the mobility consequently lessened. One of the most marked symptoms attending this state of the habit, is a disposition to irregular flushings; the surface of the body becomes suddenly heated in patches, shifting their seat so rapidly and uncertainly, that, while the patient is complaining of the flushing in one part, it will leave it and attack another. In this state of the system, the most trifling causes will excite inflammatory action in a part; and if the mobility, prior to the attack, has been strongly marked, the physician is seldom called upon to afford his assistance under circumstances more unfavourable; for the readiness with which the sensorial changes take place, causes an incessant migration of the inflammatory action from one surface or region to another. Children, after severe attacks of fever, and women in the puerperal state, frequently exhibit this deplorable disposition to shifting inflammation; and, in these cases, the very depletions we use to combat the inflammation, by augmenting the mobility, increase the tendency of the inflammation to attack different parts in succession. It is upon this principle that, in acute rheumatism, if large general bleedings be used at the beginning of the disorder, the inflammatory action shifts more suddenly, and frequently from joint to joint, and even to internal organs, in the progress of the disease, than in those cases where the bleeding has been less profuse."

From the London Medical and Physical Journal.

TREATMENT OF STRICTURES OF THE URETHRA.* By M. Dupuytren.

From a Correspondent.

The mode of curing strictures of the urethra by confining a *large* bougie at the anterior part of the obstruction, is still employed with undeviating success in the wards of M. Dupuytren and of M. Breschet at the Hôtel Dieu. The mere contact, accurately preserved for eight or ten days, often enables a catheter of the largest size to pass freely where the smallest bougie could not previously penetrate.

Although the effect would obviously be more speedy by the use of bougies with conoid extremities, capable of being wedged into the stricture, M. Dupuytren is indifferent to this advantage, from the certain fact that, sooner or later, the obstacle will be overcome without. Yet the tapered point would not only act on a larger surface at one time, but be less liable to displacement.

The bougies thus introduced are provided with four very narrow tapes or strings, whereby they are attached to a T bandage, surrounding the waist and under the scrotum. In their passage they are coiled, at equidistant points, round a ring which is placed over the body of the penis.

Where the introduction of a bougie is impeded by spasm anterior to the organic stricture, it is there fixed in the first instance. Thus, in a case of stricture in the membranous part of the urethra, wherein the urine flowed guttatim, the bougie was stopped at the fossa navicularis. It was, therefore, fixed at this part; and at the visit after the expiration of twenty-four hours, it was found to have overcome the obstacle.

The ordinary practice of introducing bougies, gradually increasing in size, on the principle of what M. Dupuytren (as we contend improperly,) calls the *mechanical*, in opposition to the other, which he designates by the term *vital* process, is also employed. In fact, although the confining of a bougie within the urethra may do well in hospital practice, yet

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* Vide Journal of Foreign Medecine, Vol. 1, page 52.

circumstances frequently occur wherein this would not be admissible; nor can it be absolutely required, when any one may be taught to cure a stricture by the graduated bougie alone.

The bougies used at the Hôtel Dieu are principally of elastic gum, tapering from one extremity to the other, which is a very considerable improvement: thus a bougie which at one end shall have a sixth of an inch in diameter terminates at the other in a fine point, capable of being worked into the minutest passage. We can scarcely contemplate a case, unattended by spasm, where, with ordinary dexterity, the introduction of such a bougie into the stricture could be impeded; and, in nine cases out of ten of retention, this penetration alone will be sufficient to promote the flow of urine, on the withdrawing of the bougie.

It may be proper to make one remark respecting the modus operandi of the bougie, which M. Dupuytren professes not to understand, as his term *mechanical* implies. There is nothing mechanical or dilatable in the process, according to the ordinary acceptation of these terms. The friction or compression produced by the bougie excites the action of the vessels, which is followed by the absorption of the thickened urethral membranes. Friction and compression operate in the same manner in the resolution of tumours on the external surface of the body.

From the London Medical Gazette.

THE RECURRENT LARYNGEAL NERVE. By Mr. Rainey.

It is now generally admitted as a fact among anatomists, that the distribution of the recurrent laryngeal nerve, in the interior of the larynx, is confined to the following muscles:—the crico-arytenoideus posticus, crico-arytenoidens lateralis, and the thyro-arytenoideus; and that none of its filaments extend to the other muscles of the larynx. Magendie seems to attach considerable interest to the limited distribution of this nerve, asserting that it is entirely restricted to the three muscles above mentioned. Cloquet has made a similar assertion; and Mr. Bell affirms that the termination of the recurrent nerve is exclusively confined to the muscles just named, and to the mucous membrane of the larynx. This opinion having emanated from the most celebrated anatomists upon the continent, and obtained the sanction of those of this country, is now acknowledged as an established fact, and thus taught in the anatomical schools of this metropolis. As in repeated dissections of the human larynx I have uniformly been able to trace a branch to the arytenoideus transversus, and the arytenoidei obliqui, I am obliged to differ from the authorities here adduced, and have thought that it might not be devoid of interest to present to the public a short description of the distribution of the recurrent nerve, as it has always appeared to me upon dissection.

The recurrent laryngeal nerve, after having passed up the neck, between the trachea and œsophagus, and supplied branches to these parts, and also to the inferior portion of the pharynx, enters the larynx between the side of the cricoid and the inferior cornu of the thyroid cartilage, immediately over a strong band of ligament, which connects these cartilages together. In this situation it detaches two or three filaments to the crico-arytenoideus posticus muscle, which ramify in the substance of that muscle, and can be traced to some delicate cellular tissue, interposed between the muscle and the thyroid cartilage. The next branch, about the size of the former, ascends obliquely inwards upon the posterior surface of the cricoid cartilage, where it is covered by the posterior crico-arytenoid muscle; near to the upper edge of that cartilage it sometimes receives a filament of communication from one of the muscular branches just mentioned: it then curves over the cricoid cartilage, close to the inner extremity of the crico-arytenoid articulation, and penetrates into the substance of the transverse and oblique arytenoid muscles, along the fibres of which its filaments can be distinctly traced.

The last nerve then proceeds forwards and upwards between the lateralis muscle and the ala of the thyroid cartilage, detaching, in its course, numerous long and slender filaments to this and to the crico-arytenoideus muscles. Some of their filaments may be seen ascending over the outer side of the arytenoid cartilage, and followed as far as the mucous membrane, where they form communications with the superior laryngeal nerve. Since first noticing the branch of the recurrent going to supply the arytenoideus transversus and obliqui, other anatomists have made the dissection precisely with the same result. This branch appears to be so uniform as to its situation, and constant in its existence, that any one, by moderate care, may dissect it, and convince himself of the fact. It is rather surprising that this branch should have been overlooked, but it is still more so that its presence should have been denied. Considering the imperfect and very limited means we possess of displaying the terminating filaments of a nerve, we must acknowledge it bordering upon assumption to deny the existence of such filaments in the vicinity of the original trunk, or a principal branch: and it must be admitted to be a much more easy and practicable undertaking to discover to what parts the visible filaments of a nerve are distributed, than to determine accurately the limits of their existence.

From the London Medical Gazette.

PATHOLOGICAL ESSAYS ON SOME DISEASES OF THE HEART; *being the Substance of Lectures delivered before the College of Physicians.* By P. Mere

Latham, M.D., Physician to St. Bartholomew's Hospital.

ESSAY IV.

General course of Diseases of the Heart and general character of their Symptoms.

In order to ascertain the nature of healthy structure, the anatomist finds it necessary not only to examine each particular organ of the body, but also to distinguish each into the separate tissues of which it is composed; to examine these tissues apart; and to familiarize himself with the visible characters which constitute their healthy condition. So too, in order to ascertain the nature of morbid structures, he must search and discriminate the traces of disease in all the primitive tissues of the body, separating each from each, and ascribing to every one its own.

Thus, the diseases incident to the different tissues which compose the structure of the heart, have, for the convenience of anatomical description, been hitherto considered apart from each other; the diseases of the pericardium apart from those of the lining membrane, and the diseases of the fleshy substance distinct from both.

The separate knowledge of the diseases of each necessarily precedes the knowledge of the manner in which they are combined together, the order in which they arise, and the relations which they bear to each other.

It sometimes happens that several, or even all the tissues composing the structure of the heart, becomes simultaneously diseased; that while the pericardium is inflamed, and, according to its own mode of morbid action, is depositing lymph in the shape of membranes, and contracting adhesions, the internal lining is also inflamed, and, according to its mode of morbid action, depositing lymph in the shape of warty excrescences; and that at the same time the muscular substance is becoming loose of texture, and the cavities of the heart enlarging themselves. But instances, I believe, are very rare in which disease can be shown to have thus begun, and been continued in several or all the structures of the heart equally and simultaneously.

Again, it sometimes happens that disease will begin exclusively in one structure of the heart, and will be strictly limited to that structure, no other part of the organ undergoing any morbid change whatever in consequence of it. But this, too, is a rare occurrence.

When disease begins, and is continued in all or several of the structures of the heart equally and simultaneously, it is, I suspect, always of a very acute character. The most striking specimen within my knowledge is the following. A boy, twelve years of age, was in perfect health on Saturday night, and dead on Tuesday afternoon at two o'clock. Upon dissection the disease was found in the heart. Four or five ounces of turbid serum, with flakes of coagulable lymph floating in it, were discovered in the pericardium, which had its internal surface covered, in various situations, with a thin layer of reticulated lymph. Thus far there were the evidences of the most intense inflammation of the pericardium at an early stage. There was no adhesion of the opposite surfaces; the lymph and serum were effused together; and the serum had partially washed away the lymph as it was deposited. Further, when the heart itself was divided, the muscular fibres were dark-coloured almost to blackness, loaded with blood, soft and loose of texture, easily separated, and easily torn by the fingers; and upon the cut edges of both ventricles small quantities of dark-coloured pus were seen among the muscular fibres. The internal lining was of a deep red colour, without any effusion of lymph. Here the acute inflammation of the muscular structure was evinced in a manner which is seldom seen; the softening and friability of its texture would have been enough to bespeak it inflamed, but here was an actual deposition of pus. It was a singular specimen of disease; I never saw another like it; and I know of no other like it upon record. (Med. Chir. Trans. Vol. vii. 323.)

When disease begins in one structure of the heart, and never afterwards spreads beyond it, it is generally of a chronic character, and occupies only a small space. A loose cellular adhesion, limited to some small portion of the pericardium, has been found to consist with a perfectly healthy state of the heart; as the same condition of the pleura with a perfectly healthy state of the lungs. So, too, the pericardium has been marbled and streaked with lymph, inherent in its texture, or deposited upon its surface, while the heart has been as free from disease as the liver has been often found to be when the same streaked and marbled condition has belonged to its peritoneal covering.

But it is neither usual for diseases of the heart to begin and be continued in several of its structures equally and simultaneously, nor to begin in one structure, and ever afterwards to be limited to it strictly and exclusively. But the habit of diseases of the heart is, to begin in one structure, and to impart themselves, or an irritation derived from them to other structures, so as directly or indirectly to produce an injury to the organization of the whole. Thus, the heart may be, and generally is, utterly spoiled as an organ whenever any one part of it is permanently diseased. If a portion of lymph be effused upon the pericardium, and there remain and contract a permanent adhesion, or if a spiculum of bone be deposited in one of the valves, there may, and generally does, follow such derangement of structure as will change the natural bulk and capacity of the entire heart, and baffle and perplex, and finally abolish its natural functions. There is no organ of the body in which the perfect soundness of every part is so essential to the health and harmonious action of the whole.

Concerning diseases of the heart, it is especially important to know in what part they begin, and what is the manner, conditions,

and rate of their progress from one structure to another. But mere dissection is insufficient to furnish this information. In order to obtain it, it will be necessary to bring the results of clinical observation into comparison with the objects of anatomical research.

I am not going to pursue a minute analysis of symptoms with the pretence of displaying the subject nosologically, but only to appeal to them so far, (and it will be very generally,) as they serve to illustrate the pathological conditions out of which they arise.

Of the signs by which physicians become acquainted with diseases in the living body, some are expressive only of the parts they occupy. The first flow directly from their essence; the second are derived from the disturbed functions and sensations of particular organs. This distinction between essential and accidental symptoms is one of great practical importance.

Essential symptoms bring diseases within the scope of clinical diagnosis, and within the compass of rational treatment. Accidental symptoms only discover where they are, not what they are, or how they are to be treated.

Some diseases have both orders of symptoms most strongly marked. An acute inflammation has its essential symptoms, which are generally the same, in whatever part of the body it is found; general heat and general excitement of the vascular system; and these teach us that it really is an acute inflammation, and how to treat it. Moreover, it has its accidental symptoms, which are different according to the part it occupies, as the brain, the lungs, or the heart; such as palpitation in one case, impeded respiration in another, and disturbance of the senses and the intellect in a third; but these alone teach us nothing concerning the inflammation, and give us no guidance or direction in the treatment of it.

Again, some diseases have no essential symptoms whatever but those only which are accidental, and which appertain entirely to the organs they occupy. A fungous excrescence, or a scrofulous tubercle, being situated in the brain, may be accompanied by a pain in the head, an hebetude of the senses and intellect, and an impaired exercise of the voluntary muscles; but the same symptoms have arisen from tumours of other kinds, and even from the lodgement of a foreign body, such as a musket ball, in the same situation. They have nothing to do with the essence of the tumour in question, and profit us nothing in suggesting any method of cure.

There is, in fact, no diagnosis of such diseases, and no rational treatment; and simply for this reason, because they have no essential symptoms.

The symptoms which flow from the essence of the disease are present with its very beginning, and accompany the whole process of its formation; whereas the symptoms which are accidental to it do not appear until it is already formed, and often not until it has endured for a considerable period; and reached a considerable magnitude. Further, it may be stated generally, that essential symptoms belong more especially to acute diseases, and that diseases, in proportion as they are more chronic and of (what is called) a specific character, are apt to lie concealed under symptoms which are derived less from their own nature than from the parts they occupy.

With respect, then, to diseases of the heart, as far as they are declared by essential symptoms, we have an early intimation of their existence, a knowledge of their real nature, and a guidance in the administration of remedies for their cure; but as far as they are suggested by accidental symptoms only, our knowledge is not of their nature but of their effects; and our treatment is not directed to their cure, but to the palliation of inconveniences which are consequent upon them.

Now diseases of the heart are found to fall under one or the other of these predicaments, according to the particular structures which they occupy. Between diseases of the pericardium and of the internal lining there is this remarkable difference, that the former are for the most part of an acute, the latter of a chronic character; and this essential difference in their nature determines the difference in the degree of knowledge we have concerning them. As morbid anatomists, we can see and describe the visible characters of both with equal precision; but as physicians, seeking to mark the period of their origin, and to measure the rate of their progress, as the indispensable conditions of adapting a remedy to their cure,—as physicians, we know but little concerning the diseases of the internal lining, while we know much that is certain and useful concerning diseases of the pericardium.

Diseases of the pericardium, by virtue of symptoms which are essential, and derived from their own nature—of symptoms which are present with their beginning, and accompany the act of their formation—do often (I will not say always) submit themselves with tolerable certainty to clinical diagnosis, and to medical treatment with tolerable success. They often bring (I will not say always) the knowledge of their existence within the period which includes the possibility of their cure.

But diseases of the internal lining having no symptoms arising out of themselves in the process of their formation, admit no diagnosis of their kind, and no rational treatment.

The time of their accession, and every stage of their further progress, are alike unknown; and the notice of their existence is only at length supplied by the evidences of new changes of structure in the heart itself, and new disorders in the constitution at large, when both the original and all the consequent diseases are absolutely incurable.

Diseases of the heart, how complex soever and extensive they may be, have often their

original seat either in the pericardium or in the internal lining. If in the former, their history is capable of being traced from their commencement, and pursued throughout their course regularly and connectedly; if in the latter, their history must be taken up at a period remote from their origin, and will always be most doubtfully and imperfectly made out.

From the Glasgow Medical Journal.

ON THE UTILITY OF SULPHATE OF QUINA IN STRUMOUS OPHTHALMIA; WITH CASES. By William Mackenzie, Andersonian Professor of Anatomy and Surgery, and One of the Surgeons to the Glasgow Eye Infirmary.

This disease is commonly attended by great restlessness during the night, terminating in profuse perspiration. The skin is, in general, pale and relaxed, the abdomen tumid from muscular weakness, and the excretions from the bowels unnatural. The local symptoms are extremely peculiar, especially the excessive intolerance of light, profuse epiphora when the eyelids are forced asunder, fascicular redness of the conjunctiva, and formation of minute pustules or phlyctenulæ on the cornea, too frequently ending in ulcers and indelible specks.

I need not here insist on the utility of local blood-letting, by leeches, and scarification of the palpebral conjunctiva; of purgatives; and of tonics, in the treatment of this tedious and distressing disease. My object is solely to recommend, and that in the most earnest manner, the employment of the sulphate of quina in this complaint. After many years' experience in the treatment of strumous ophthalmia, and a trial of numerous and various internal remedies, I have found none so useful as quina. In most instances, its effects have been very remarkable; and, indeed, although I have met with a few cases which appeared to resist its beneficial influence, in most of the little patients to whom I have administered it, it has acted like a charm.

I do not trust to the quina alone; nor do I, in general, begin the use of it till the stomach has been cleared by an emetic, and the bowels put to rights by repeated doses of calomel and rhubarb, or some other such purgative. I continue to leech and scarify, and to use such local applications as the vinum opii, or nitras argenti solution, exactly as I used to do before I became acquainted with the powers of the sulphas quinæ over the constitutional disorder which attends strumous ophthalmia, and thereby over the local complaint.

The dose which I employ is generally one grain thrice a-day, rubbed up with a little sugar; in very young children, half a grain; and in adolescents or adults, two grains.

Cinchona is not a new remedy in strumous ophthalmia. Dr. Fothergill recommended it many years ago, in very strong terms;* but its powers, in the form of powdered bark, or in any other form in which I have tried it, are insignificant in comparison to those of the sulphate of quina.

I shall add a few cases from the Journals of the Eye Infirmary, illustrative of the effects of this most valuable addition to ophthalmic, as well as to general, medicine.

Case I. 4th July, 1828. Elizabeth Rodgers, aged 6. Conjunctivitis strumosa of four weeks' standing, consequent to measles, and affecting chiefly the left eye.

℞ Tartr. Antimonii gr. iv. Aquæ ℥vi. Solve. Detur pro emetico, more solito.†—Instill. gtt. solutionis Nitratis Argenti.‡—Utatur Collyro Muriatis Hydrargyri.§

7th. ℞ Sulphatis Quinæ gr. vi. Sacch. Albi ℥ss. M. et divide in pulveres xii. Capiat. i. ter. indies.

21st. Eyes rather more tender, but till today they were improving. ℞ Subm. Hydr. gr. i. Pulv. Jalap, gr. viii. M. Cap. q. p.—Omitt. Pulv. Quinæ hodie.

28th. Much improved.

10th August. Still improves.—Contin. Quina et alia.

1st Sept. All but well.

29th. Dismissed cured.

Case II. 23d July, 1828. Jane Thomson, aged 9. Ophthalmia strumosa of the right eye, of fourteen days' standing. A deep ulcer near the centre of the cornea, surrounded by a broad effusion of lymph. An onyx at the lower edge of the cornea. Much reduced in general health by bleeding, purging, and blistering. Affected with night sweats.

℞ Sulph. Quinæ gr. xii. Sacch Albi ℥ss. M. Divide in pulveres xii. Cap. i. indies.—Instill. gtt. Sol. Argent. Nitr.—Collyr. Mur. Hydr.

24th. Onyx all but gone.

27th. Ulcer contracted.

29th. Bowel complaint. ℞ Subm. Hydr. gr. iv. Opii, gr. ss. M. Divide in pulv. ii. Cap. i. hora somni.

6th August. Eye continues to improve. Cont. Quina et alia.

16th September. Eye strong. Ulcer has been cicatrized for some time, and the leucoma grows thinner. ℞ Sulph. Quinæ gr. vi. Sacch. Albi ℥ss. M. Divide in pulveres xii. Cap. i. ter indies.‖

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* Medical Observations and Inquiries, vol. i. p. 303. London, 1763. Also, Dr. Fordyce, in same vol. p. 192. Dr. Fothergill used a decoction of the powdered bark, with liquorice root.

† A tablespoonful every three minutes, till free vomiting is induced.

‡ 4 grains to 1 oz. of distilled water.

§ 1 grain to 8 oz. of water.

‖ In all probability the cornea would have been penetrated, if the depletory system had been persisted in, which this patient was undergoing before she came to the Eye Infirmary.

Case III. 25th July, 1828. James Walker, aged 7. Ophthalmia strumosa of the right eye, of five weeks' standing. Conjunctiva much inflamed. A pustule, the top of which is ulcerated, at the lower part of the cornea.

Emeticum Tartr. Antimonii, more solito.—Instill. gtt. Sol. Argent. Nitr.—Collyr. Mur. Hydr.

27th. Vesicatorium pone aurem dextram.

30th. Hirudines vi. ad tempus dextrum.

31st. Repetatur vesicatorium.

2d August. Improvement slow.—℞ Sulph. Quinæ gr. vi. Sacch. Albi ʒss. M. Divide in pulv. xii. Cap. i. ter indies.

10th. Considerable improvement since last report.

18th. Ulcer cicatrized, and eye strong.

27th. Omitt. Pulveres.

29th Sept. Sight perfect. Leucoma much contracted. Dismissed cured.

Case IV. 13th August, 1828. John Tielman, aged 1¾. Conjunctivitis strumosa of the right eye, with an albugo on the cornea, and red vessels running into it. Restless, and sweats through the night. Symptoms consequent to measles, four months ago.

℞ Sulph. Quinæ gr. vi. Sacch. Albi ʒss; M. Divide in pulv. xii. Cap. i. ter indies.—Lac cum aqua tepida, ter indies, pro collyro.

17th. Rests much better, and sweats less. Eyes stronger.

27th. Still improves.

31st. Bowel complaint. ℞ Subm. Hydr. gr. i. Sacch. Albi gr. vi. M. Cap. q. p.

7th Sept. Much improved. Contin. Quina.

Case V. 15th August, 1828. James Tassie, aged 8. Ophthalmia strumosa of the right eye. Cornea rough and nebulous. Has been troubled with this complaint, more or less, for seven years past. There formerly was a considerable albugo on the right cornea, but it had diminished much till within a fortnight ago, when a relapse took place.

Emeticum Tartr. Antim. more solito.—Instill. gtt. Sol. Argent. Nitr.

16th. An onyx at the lower edge of the right cornea, which was not observed yesterday; but he opens the eye better to-day. ℞ Sulph. Quinæ gr. xii. Sacch. Albi ʒss. M. Divide in pulv. xii. Cap. i. ter indies.—Collyr. Mur. Hydr.

18th. Onyx gone.—Belladonnæ Extr. ad regionem circumorbitalem.

20th. The intolerance of light having considerably subsided, the cornea can now be more completely seen. The centre of it appears to be perforated by an ulcer, and the pupil contracted.

22d. Iris everywhere in contact with the cornea. Eye continues easier.

27th. The iris appears to be returning a little into its natural place. Some of the pupil is seen. He sees a little with the eye.

28th. Pupil expanding, and cornea clearing.

1st Sept. Pupil free of the cornea, except at its inner edge, where it still adheres by a single point.

16th. Iris entirely free of the cornea.

23d. Eye continues to improve.*

Case VI. 18th August, 1828. Janet Yule, aged 5½. Conjunctivitis strumosa of the left eye, with a small albugo on the cornea. Little or no redness, but eye very intolerant of light.

℞ Sulph. Quinæ gr. vi. Sacch. Albi ʒss. M. Div. in pulv. xii. Cap. i. ter indies.

19th. Collyr. Mur. Hydr.

26th. Instill. gtt. Sol. Argent. Nitr.

28th. Intolerance of light much abated.

30th. Bowels loose. Omitt. Quina.—℞ Pulv. Rhei gr. viii. Cap. q. p.

1st Sept. Continues to improve. Repetant. Pulv. Quinæ.

3d. Bowels again loose. Eye much improved.—Cap. Pulv. Quinæ i. indies.

14th. All but well.

19th. Dismissed cured.

I have found the sulphate of quina highly serviceable in a variety of other cases besides those of the pure phlyctenular ophthalmia; for example, in corneitis, in ophthalmia tarsi, and in catarrhal ophthalmia modified by the strumous constitution.

Case VII. 7th July, 1828. John M'Kinnon, aged 6. Ophthalmia tarsi, of two years' standing. Copious discharge of purulent matter from the diseased Meibomian follicles and conjunctiva. Left ear discharging matter, and much covered with porrigo.

Instill. gtt. Sol. Argent. Nitr.—Appl. Ung. Hydr. Præc. Rubr.† ad margines Palpebr. o. n.—Collyr. Mur. Hydr.

9th. ℞. Sulph. Quinæ gr. xii. Sacch. Albi ʒss. M. Div. in pulv. xii. Cap. i. ter indies.

18th. Much improved.

3d Aug. All but well.—℞. Sulph. Quinæ gr. vi. Sacch. Albi ʒss. M. Div. in pulv. xii. Cap. i. ter indies.

Case VIII. 9th July, 1828. Janet Burns, aged 34. For twenty weeks has been labouring under an attack of conjunctivitis in both eyes, probably catarrhal in the first instance, modified by a strumous constitution. Has a sensation of sand in the eyes. Eyelids adhere in the morning. Much intolerance of light, and epiphora. Complains a good deal of pain in the temples, alternating with pain in the eyes. Pain of eyes easier towards morning. Palpebral conjunctiva slightly granular.

Instill. gtt. Sol. Argent. Nitr.—Ung. Præc. Rubr.—Collyr. Mur. Hydr.—℞. Sulph. Quinæ

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* This was one of the most remarkable and pleasing recoveries from penetrating ulcer of the cornea, and involved iris, which I have met with. The recovery was mainly attributable to the salutary operation of the quina on the inflammatory affection, and to the mechanical effect produced by the belladonna. I may here remark, that belladonna, applied in cases where the iris protrudes to one side of the cornea, has sometimes appeared rather to favour a farther prolapsus: not so when the edge of the pupil is involved in an ulcer of the cornea.

† 12 grains to 1 oz. of axunge.

gr. xxiv. Sacch. Albi ʒi. M. Div. in pulv. xii. Cap. i. ter indies.

10th. Scarif. facies interna palbebrarum.

13th. Improving.—Contin. remedia.

15th. More epiphora.—Appl. Sulphas Cupri ad faciem interiorem palpebrarum.—Vesicatoria pone aures.

16th. Conjunctiva of the eyelids more vascular.

17th. Instill. gtt. succi expressi radicis Holci Avenacei.*—Omitt. Sol. Argent. Nitr.

21st. Eyes somewhat stronger.

6th Aug. Still improves.—Contin. remedia.

30th. Eyes perfectly well. Dismissed cured.

From the London Medical Gazette.

CASE OF DILATED ŒSOPHAGUS.

By Herbert Mayo, Esq.

Mary Blores, æt. 33, was admitted into the Middlesex Hospital on the 16th of November. She was in a state of extreme feebleness and emaciation. Those who brought her said that during the preceding month she had appeared to swallow nothing: what she took as food seemed to her to stop in the gullet, and after a few minutes returned. I found, however, that a large œsophagus-bougie passed readily into the stomach, meeting with no obstruction beyond a spasmodic resistance in the pharynx. A draught of milk and water was given her—she swallowed without much effort, but it quickly returned. In the course of the afternoon a pint of beef tea was injected through an elastic tube into the stomach—it was thrown up directly.

I now learnt from her that she could swallow liquids much more readily than solid food; that when she took a small quantity, it seemed to her not to reach the stomach, and in three or four minutes was invariably thrown up; that on taking a large draught she had an impression that it reached the stomach—in this case vomiting did not follow so soon, and some part of the draught was permanently retained; that she craved food and drink, and was literally dying of hunger and thirst; that the vomiting which took place was not preceded by nausea, although in its progress it had all the appearance of ordinary retching; that the matter vomited was not thrown up at once, but by successive efforts; it consisted of the food she had last taken, mixed with colourless mucus. The belly was so shrunk that the umbilicus was not more than an inch distant from the spine, upon which the pulsations of the aorta were readily felt: there was no enlargement or hardness about the stomach, no particular tenderness on pressing the epigastrium, no sensation of pain or heat now or formerly.

The complaint had began ten years ago, during pregnancy, since when she had never been free from it, although at times her sufferings had been less, and she had been able to retain some portion of her meals. She had borne in this period three children; the vomiting had lasted during the whole period of her pregnancies, and during her confinement. The principal remedies which had been used for her relief were a succession of blisters on the pit of the stomach—but they had produced no benefit. Latterly her symptoms had been greatly aggravated.

This patient was attended by Dr. Watson and myself. But the means which we tried to enable her to retain her food, and to support her expiring strength, had scarcely a temporary effect. She died on the 2d December, sixteen days after her admission. The body was carefully examined, at the expressed wish of her relatives.

The unusual appearances found in the abdomen were—1. the smallness of the first part of the duodenum, which was but half the ordinary size of the ileum; 2. the capaciousness and fulness of the gall bladder,—from which, however, on compressing it, the bile flowed readily into the intestine; 3. a contraction of the middle of the stomach of the length of two inches, for which extent the peritoneal coat was thickened and opaque, and the inner membranes folded in deep longitudinal rugæ, the mucous surface of which was partially suffused with circular spots of red. The breadth of the contracted part of the stomach, as it lay collapsed, was an inch and a half.

But it was in the chest that the most remarkable circumstance presented itself. The œsophagus gradually enlarged from the pharynx, which was perhaps rather narrower than usual, to an extraordinary degree of dilatation; the greatest breadth which it attained was situated about four inches above the cardia: the tube then contracted more abruptly, so as to render the termination of the œsophagus, like its commencement, of nearly the usual dimensions. The structure likewise of the cardiac extremity for about an inch, and of the pharyngeal end for about half an inch, was healthy. The intermediate part presented, when inverted, the following curious appearance:—The inner membrane was thickened and opaque, and had *the appearance* of having partially yielded from dilatation; at the upper part the furrows or thinner parts of the membrane followed in some degree a longitudinal direction; at the lower part the surface was pitted with shallow depressions of various figures. At the furrows or depressions the membrane seemed of the natural thickness and colour; the intermediate raised and thickened part was opaque and whitish. The muscular fibres of the œsophagus were of the natural colour and thickness.

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* The expressed juice of the knotted root of the Holcus Avenaceus is a remedy from which I have seen much benefit, in chronic catarrhal ophthalmia, and in granular conjunctiva.

From the Glasgow Medical Journal.

CASE OF SPINAL NEURALGIA.

By John Allan.

Mary Durand, a single woman, 24 years of age, applied to me on the 25th of June last for relief, complaining of pain in the left side, under the mamma, not in the gland. The pain was much aggravated by pressing with the fingers against the ribs, and sometimes, she said, it extended down the side, as far as the crest of the ilium. It was accompanied with pain at the top and towards the back part of the left shoulder, which she described as a sensation of burning, not interfering with the movements of the joint, but so tender to the touch was the part, that she could not rest on that side in bed, and always awoke in severe pain, if she happened to turn upon it. She had not been altogether free from either of those pains for nearly four years, but they had always been worse for a few months every spring and autumn. About seven years ago she had been suddenly attacked, while kneeling, with severe pain in the left knee, darting up the thigh and into the loins. Considerable swelling and local inflammation had then appeared in the knee, but were soon removed, while the pain in the knee and loins lasted, with little or no intermission, for three years and a half, when, while walking, she was surprised to find her lameness suddenly leave her, and, at the same instant, the pains in her side and shoulder came on for the first time.

Her complexion was pale and sallow, with an aspect expressive of habitual suffering. Her tongue was slightly furred and moist; pulse feeble. She was emaciated, and had no relish for food; bowels inclined to be costive. She had begun to menstruate very soon after 12 years of age, but the discharge had never occurred oftener than once in five or six weeks. The discharge was copious, unaccompanied with uterine pain, and generally lasted for eight days. About two years ago, however, it had become less in quantity, of a paler colour, and accompanied with pain, though still lasting eight days.

Having perused Dr. Brown's paper on Irritation of the Spinal Nerves, shortly before this patient presented herself, I was led to examine her spine, when I found that there were three or four of the middle dorsal vertebræ, the most moderate pressure upon which gave her considerable pain in the part, and increased that in her side. She had never previously felt pain in that part of her back, although the tenderness was too unequivocal, and too distinctly limited in extent, to leave any doubt as to its reality.

A few leeches being applied over the tender part of the spine, she was surprised to find the pain in her side immediately relieved. Thus far Dr. Brown's observations were curiously confirmed. My acquaintance with the powers of subcarbonate of iron, in relieving pain of the neuralgic kind, of which I considered this to be an example, induced me to prescribe one drachm to be taken three times a day. At the end of a week after this treatment was commenced, she declared herself more free from pain, than she had ever been during the seven years that had elapsed since the pain first began in her knee. Her countenance was visibly improved, both in expression and complexion, and the pain had become intermitting, recurring every evening only, instead of being constant as heretofore.

The periodical character now displayed by this affection, induced me to give, instead of subcarbonate of iron, powder of bark, and carbonate of soda (ten grains of each,) every four hours. A blister was likewise applied to the spine. At the end of another week the pain was still less troublesome, and the blister being healed, the spine was directed to be rubbed every night and morning with ointment containing tartrate of antimony, and the bark and soda were continued. On the 14th of July she complained of constipation with headach, and heat of skin, on account of which, and with a view to bring on the menstrual discharge, I gave her half an ounce of oleum terebinthinæ, with the same quantity of castor oil. This dose not having acted on the bowels, she took at bedtime a powder containing three grains of calomel, with fifteen of jalap. This medicine brought away a large quantity of a highly offensive fæces of a bottle-green colour. She was now directed to take half a drachm of oleum terebinthinæ, mixed with five minims of liquor potassæ, and half an ounce of cinnamon water, three times a day. The jalap and calomel were likewise ordered to be taken every second or third night. This practice being continued till the 4th of August, an enormous quantity of scybalous and green fæces, with four large lumbrici, and a vast number of ascarides, were discharged. The turpentine mixture was then ordered to be still continued, but instead of the jalap and calomel powders, a pill containing four grains of the compound colocynth pill, with half a grain of calomel, was directed to be taken every night and morning. This plan was pursued till the 18th of August, when the pains had completely disappeared, her alvine evacuations had become healthy, her complexion clear, her appetite good, and her nights passed in sound refreshing sleep on either side.

The only remark which I think worthy to be made on this case, is, that the neuralgic symptoms seemed to have been so severe and unremitting for so long a period of time, as to have drawn the patient's attention away from regarding those feelings which are frequently felt where so loaded a state of bowels exists, accompanied with worms. That the neuralgic pain was really dependent upon an irritable or tender condition of a portion of the spinal marrow, there appears sufficient reason to believe. As soon as that local irritation was relieved by the treatment directed for it, the brain, sympathizing with the disordered state of the digestive organs, began to be the

seat of pain and irritation. This led to the administration of those purgatives, by which the bowels were fully evacuated, and brought into a healthy state. I cannot conclude without stating, that I think the profession considerally indebted to Dr. Brown, for the valuable paper already referred to.*

From the London Medical Gazette.

CASES OF GANGRENE OF THE LUNGS.

Some interesting cases of gangrenous suppuration of the lungs were published by Dr. Chambers, about eighteen months ago, in which he particularly pointed out the horrible fœtor of the breath as a diagnostic mark of the disease. The following cases which recently occurred at the Hôtel Dieu are good illustrations of more extensive destruction of the lung by a similar disease.

Case I.—A man, aged 32, of good constitution, laboured under bronchitis for some weeks, to which he paid little attention, when he was suddenly seized with pain in left side, dyspnœa, considerable cough, and a rigour, followed by fever. He was admitted into the Hôtel Dieu next day. Crepitation was perceptible over the whole extent of the left lung, posteriorly, and reaching to the site of the pain in the side, which was increased by percussion; great oppression, with frequent cough, and expectoration of violet-red colour, mixed with mucus; pulse frequent and small; constant chilliness; cheeks flushed.

Next day the symptoms remained unabated, and *fœtor of the breath* was observed. Two days after it is stated that the expectoration maintained the same appearance, but *was now fœtid;* the breath was, however, still more offensive, and during the fits of coughing particularly so. In the evening the breath is said to have become *gangrenous.*

21.—The cough was small, difficult, and painful, producing an expectoration of violet-coloured matter, approaching to chocolate, *with a characteristic odour.*

22 to 25.—Expectoration and breath emit an *intolerable stench.* On the latter day the patient died.

Examination.—The body not emaciated. Strong adhesions of the left lung to pleura costalis. At its posterior part a large gangrenous layer, occupying the two superior thirds of the lung, covered at some points by a false membrane. The lower third, and the parts round the gangrenous portion, in different degrees of inflammation, and hepatized; the putrid mass was in great part black or violet-coloured, containing fragments of the pulmonary texture; the smell gangrenous, but less so than that of the breath during life; pus might be squeezed from the adjacent part of the lung.

Case II.—A man aged 55, enjoyed good health till the beginning of May, at which time he experienced pain in the left side of the thorax after exposure to cold. During the next few days the cough was frequent, and the expectoration tinged with blood. A rigour now came on, followed by a distinct exacerbation of fever, and he came to the Hôtel Dieu. At this time he presented symptoms of inflammation of the lungs, and was bled with relief; he left the hospital in twelve days, being sufficiently well to resume his occupation. Scarcely had he done this, however, when he had a relapse, accompanied by great lassitude, oppression of breathing, and frequent cough. At the end of a week he returned. He was now at the twenty-first day of the attack. His skin was yellowish; face pale or of a leaden hue, and greatly altered; his cough frequent, with abundant expectoration of matter like chocolate, with small specks resembling pus, and little bodies about the size of peas, which appeared to be portions of the lung. This putrid mass exhaled a *gangrenous odour*, and the expired air was impregnated in a high degree with an equally disgusting smell, which surrounded the patient's bed with a contaminated atmosphere. Percussion gave a clear sound over the whole extent of the chest; auscultation did not discover the pulmonary expansion on the right side. The pulse was weak, but not frequent; the patient was in a state of extreme prostration. Next day the odour of the breath and expectoration was, if possible, more dreadful. He lingered two days longer, during which time the fœtid smell somewhat diminished, and the proportion of pus in the expectoration increased.

Examination.—The left lung had contracted firm adhesions, particularly above and behind. It was torn in attempting to remove it, and there issued from the middle and posterior part a large quantity of dark-coloured matter, similar to what had been expectorated. An incision was made along the back part of the lung, and laid open a large cavity, occupying all the extent of the pulmonary organ, and still in part filled with the same kind of dark putrid matter. On washing out the cavity it was perceived that it was lined with a smooth and white membrane, to which were still adherent, at some points, dark filamentous shreds; these were removed by the least touch, and left the surface smooth beneath. The boundary was formed by a false membrane, about a line in thickness, which separated the mortified from the sound parts. The lung was reduced to a kind of bag, the parietes of which were on an average about an inch thick. In the upper part of the lung, which was hepatized, an incision discovered a number of smaller tubercles, which in the centre were in a crude state; and at one point several had suppurated, forming a cavity large enough to contain a nut.

[The Editors of the *Journal Hebdomadaire*, from which these cases are abridged, add, in a note, that although the fœtor of the expec-

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* Vide Journal of Foreign Medicine, Vol. II. page 315.

toration, such as above described, is usually dependent on gangrene of the lungs, yet that this is not invariably the case. In confirmation of this assertion they refer to three instances of fœtid expectoration—in the first, the patient is still alive; in the second, there was chronic bronchitis, with considerable dilatation of numerous bronchi; and in the third, bronchitis with some appearances of chronic pneumonia. Laennec gives a case of dilatation of the bronchi, with remarkably fœtid expectoration. The argument derived from the first patient having survived we consider to be altogether erroneous, as patients more frequently recover from this than other forms of purulent expectoration.—*Ed.*]

From the London Medical Gazette.

CASE OF CYNANCHE TONSILLARIS, WITH HEMORRHAGE. By Thomas Watson, M.D.

Joseph Smith, a coachman, 26 years old, was admitted into the Middlesex Hospital on the 22d of October. He complained of sore throat and inability to swallow. The external fauces were considerably swelled on both sides. He could open his mouth to a very small extent only; and he was unable to protrude his tongue, which was large and furred. It was, therefore, impossible to obtain a satisfactory view of the back part of the mouth; but the tonsils could be indistinctly seen very red and large, and on the left tonsil a white speck was visible. His breath was peculiarly offensive, and he complained of an unpleasant taste in his mouth. The pulse was about 90. The bowels were confined. He said that the soreness of throat had come on in the evening, five days before. He had been more than once wet through, in the preceding week; had felt unwell, and had some shivering, a day or two before the throat became affected.

Twelve leeches were immediately applied to the outside of the throat, beneath the angles of the jaws. Five grains of calomel were given in the evening, and the "haustus sennæ compositus" of the hospital pharmacopœia the next morning.

On the 23d the outward swelling was not apparently diminished, but he said that he had experienced great and immediate relief from the leeches, and the bowels had been freely purged. He was directed to use a myrrh gargle, and to take ʒj. of the sulphate of magnesia in ʒiss. of the compound infusion of roses, every eight hours. From this time to the 5th of November there was but little variation in the daily reports, and not much change had occurred in the local symptoms. There was still much swelling of the external fauces on each side, and the same difficulty existed of obtaining a fair view of the tonsils. The patient was still unable to move his tongue, or to separate his jaws to the width of more than half an inch. During this period he had occasionally felt an obscure sensation of throbbing in the throat, and he sometimes complained of pain shooting from the throat into both ears. He was much distressed throughout by the accumulation of viscid and ropy mucus in the fauces, and was almost continually, whilst awake, trying to hawk up the mucus. The same offensive fœtor was present: this was in some degree corrected by a gargle containing the chloruret of lime, in the proportion of 15 grains to the pint of distilled water. The bowels continued freely open; the pulse was a little above 100, and of moderate strength and fulness; the skin cool. Leeches were repeatedly applied to the throat, always with relief to his uneasy sensations there, but never with any decided influence upon the external swelling, which remained hard and somewhat tender. A blister to the left side of the neck, and poultices, had also been applied, and the steam of warm water for some time diligently inhaled. No apparent benefit resulted from these measures. He obtained sleep and ease, after one or two very disturbed and restless nights, by the occasional exhibition, at bedtime, of half a grain of the acetate of morphia. He was able to swallow soft food.

On the 5th of November the swelling had somewhat subsided, especially on the right side of the neck; the fluctuation of matter was perceptible just below the symphysis of the chin, and, a puncture being made by a lancet in this part, a considerable quantity of very fœtid pus was discharged. The tongue was still large and yellow, and immoveable by any effort of the patient. He could swallow somewhat more easily. He was much quieter, and less distressed by the accumulation of mucus in the throat. The next day he could open his mouth better, yet still imperfectly; no ulceration of the tonsils could be detected, but the fauces were embarrassed by tenacious and stringy mucus.

On the 7th November, about 9 o'clock in the morning, a quantity of florid blood was suddenly discharged from the mouth, and continued to flow till 12 or 14 ounces had escaped. Infusion of roses, containing an additional quantity of sulphuric acid, was injected by means of a syringe against the back part of the mouth, and this apparently restrained the hemorrhage. The blood which had been discharged coagulated into a tolerably firm clot, and contained here and there some portions of a curdy whitish substance. Obscure fluctuation was now detected at the lower part of the throat externally, a little to the left of the thyroid cartilage. A lancet was passed through the skin, and a very small quantity of horribly fœtid pus was evacuated. At half past 9 in the evening the hemorrhage recurred from the mouth, and a pint or more of florid blood was discharged in a small but continued stream; and more was excreted, mixed with mucus, afterwards. To so small an extent could the patient open his mouth, that it was found impossible to mop the fauces by means of a sponge fastened on a probang, and soaked in a saturated solution of alum.

The alum solution was therefore injected against the fauces, and the hemorrhage ceased. At half past four the next morning it returned again, and nearly two quarts of florid blood were lost, when the bleeding stopped, and he became so faint that it was necessary to give him a little wine and water. On that day (the 8th Nov.) the patient was seen by Dr. Southey and Mr. Mayo, as well as myself. There was then no hemorrhage. The pulse was small and rapid. It appeared impossible to ascertain precisely even from what part of the mouth or throat the bleeding had chiefly proceeded. The mouth could be opened sufficiently wide to allow the finger to reach the fauces, but no ulceration could be felt. There was considerable fulness and swelling in front of the throat externally, and the orifice made by the lancet the day before was of a livid colour, and apparently gangrenous; and this appearance extended a quarter of an inch around it. The peculiar fœtor was still great. The expediency of tying one of the arteries was considered: but as it was very uncertain from what exact place, or even from which side of the throat, the blood came, this did not seem advisable or justifiable. It was supposed that ulceration had laid open some artery, probably the lingual, but whether the lingual, or some other branch, and on which side, could not be certainly made out. The incipient gangrene also was thought to be unfavourable to tying the carotid, even if the side whence the hemorrhage proceeded could have been determined. It was resolved therefore to support the patient's strength as cautiously as possible, and to endeavour to apply some styptic, or to act according to circumstances, if the bleeding should return. A stale-beer poultice was applied round the neck, and the following draught was prescribed, to be taken every three hours:—

℞ Quinæ Sulphatis gr. ij.
Acidi Sulphurici Diluti ♏xv.
Decocti Cinchonæ ℥iss. M. fiat haustus.

The next day, the 9th, the hemorrhage had not returned. A considerable quantity, however, of dark coagulated blood had been discharged from the external opening, at the lower part of the throat; and the swelling of that part had nearly disappeared. It was plain, from this circumstance, that a communication existed between the external wound and the place which gave issue to the blood internally; the gangrenous appearance had not spread. On the 10th a small slough had separated, the gangrene having been trifling in extent, and quite superficial. A puriform discharge, unattended by fœtor, had taken place from the external wound. There had been no return of hemorrhage, and he swallowed better. On the 11th and 12th he is reported as going on well, except that his nights were restless. The pulse 108; the skin rather above the natural temperature, and the sore continuing to discharge. The same medicines were continued, and an opiate given in the evening, after which he slept well.

From this time to the 21st—that is, for a fortnight from the period of the last hemorrhage—he continued slowly to gain strength. The bowels acted regularly, and matter was still discharged from the sore; he could not, however, move his tongue, nor articulate his words, nor open his mouth, except to a slight extent.

His appetite was good, and at his earnest request he was allowed a small portion of tender mutton chop, to be cut into small pieces, and swallowed with caution. Soon after taking some of the meat, which, though divided into very small fragments, excited coughing when it was swallowed, blood was found to be trickling in small quantity from the external wound: when gentle pressure was made over the wound, blood came from the mouth; the hemorrhage, however, lasted but a short time, and was so trifling in amount that it was not thought necessary to apprise me of its occurrence.

At half past eleven at night it suddenly recurred profusely, and from one to two pints of blood were lost, when the bleeding ceased. About twelve o'clock I reached the hospital, where I found Mr. Mayo, who had also been summoned upon the renewal of the bleeding. The patient was then quiet, but weak, languid, and pale; and the pulse was feeble, and beating 144 times in the minute, and he complained of being very chilly and cold. It was found that a probe introduced into the external wound passed towards the left side of the neck; and on further examination with the finger, the os hyoides on that side could be felt quite denuded and rough. It was now evident that the bleeding vessel belonged to the left side of the neck, and it was determined, in consultation with Mr. Joberns, who had also arrived, that a ligature should be put upon the left carotid artery, as affording the patient the only chance of security against death by hemorrhage. For this purpose he was carefully moved from his bed to a table in the ward. Before, however, the operation could be commenced, the hemorrhage recurred afresh; it became necessary to raise him into the sitting posture, and blood, fluid and clotted, and mixed with tenacious mucus, was expelled with difficulty from the mouth, by efforts partly of hawking and partly of something like the action of vomiting. Mr. Mayo was able, by inserting his finger into the wound, to compress the artery between the finger and thumb, and to arrest the hemorrhage; but the patient was now dying; his efforts to clear the throat had become less effectual, his countenance was covered with perspiration, and a little flushed. He was laid down again upon the pillows, became slightly convulsed, and presently expired.

From time to time after the last breath was drawn, and at considerable intervals, a convulsive motion of the chest, or ineffectual effort to inspire, took place, whilst the pulse went on, though reduced in frequency to probably half its former number of beats; and the action of the heart against the intercostal muscles could be seen. At each convulsive motion of the thorax, the force of pulsation

at the wrist was, for five or six beats, sensibly increased; but the pulse gradually ceased to be felt, the action of the heart was no longer perceptible, the face became pale, the eyes fixed, and the pupils dilated. The mode of death was clearly by asphyxia, and not by syncope.

This conclusion, which the symptoms attending the act of dissolution had not left doubtful, was confirmed upon the examination of the body on the 23d, thirty-seven hours after death. The carotid artery had been previously injected, and its branches were filled with wax; these branches were severally traced. It was found that an abscess had existed, which opened internally behind and below the left tonsil, and nearly opposite to the epiglottis; through this outlet the bleeding into the mouth had taken place; the wall of the abscess where it opened internally was very thin. This abscess ran along the left side of the larynx, leaving the os hyoides rough and bare, and terminated externally by the opening already described, and which was made by the lancet. The facial and lingual branches of the carotid arose (as they are known frequently to do) by a common trunk. The lingual branch was traced to the situation of the abscess, where it terminated by an open mouth, about which the matter of the injection was found extravasated; on tracing the same artery beyond the abscess, it was seen to be quite empty. There could be no doubt that this was the artery from which the hemorrhage had proceeded, and that it had been divided by ulcerations at the place where the abscess was situated. On slitting up the trachea, bronchi, and their branches, they were found to contain coagulated blood; there was a firm clot in the larynx; and another, composed partly of tenacious mucus, in which the coagulum of blood was mixed and entangled, remained at the summit of the fauces. The lungs were large and distended, and blood could be traced through many of the bronchial ramifications into the very air vesicles; this was more the case in some parts of the lungs than in others. A section of those parts where it was most evident presented just such appearances, but smaller and more numerous, as are seen in what Laennec has called "pulmonary apoplexy." On the external surface of the lungs, as is frequent in that disease, some well defined spots, of an uniformly dark colour, were visible; upon cutting into these they were found to have been produced by a sanguineous engorgement of the extreme vesicular branches of the air tubes, the boundary depending apparently on the extent of the lobules in the several cases. In some parts of the lungs this appearance did not exist—in those parts where it occurred, it was partial; blood had been forced to the extremities of some air tubes, and not of others. The blood in the blood-vessels was fluid, and escaped before the condition of the cavities of the heart, in regard to their contents, was ascertained. No vestige of ulceration could be perceived on either of the tonsils.

From the Revue Medicale.

OBSERVATIONS PQUR SERVIR A L'HISTOIRE DE L'HYPERTROPHIE DU CERVEAU. Par Meriadec Laennec, D.M.P.

Hypertrophy of the brain is an organic alteration which is still little known, if we may judge from the silence of anatomists and physiologists on this subject.* Professor Laennec, so far as I know, is the first by whom it has been mentioned, without, however, giving any detailed examples of the disease. The following observations by him, are appended to a memoir of M. Matthey of Geneva, on the distinctive characters of internal hydrocephalus: "There is, moreover, a third alteration which produces the same effects. Morgagni observed, that in some of the bodies which he examined, the brain appeared to be too voluminous relatively to the cavity in which it was contained, and from this circumstance to have been compressed. (*De Sedib. et Caus. Morbor.* Epist. iv. No. 32.) M. Jadelot has informed me, that he had witnessed the same thing in children, and has remarked that a great number of those who die with symptoms of hydrocephalus internus, present upon dissection, no other morbid appearance than this disproportion of volume, between the brain and cavity of the cranium. I have also had occasion to see several cases which I considered as examples of internal hydrocephalus, and where, upon examination, a very minute quantity only of water, was found in the ventricles, while the circumvolutions of the brain being strongly flattened, indicated that this viscus had undergone a compression which could only be attributed to an increase of volume, and consequently to a too active nutrition of the cerebral mass." (*Journal de Medecine* de MM. Corvisart, Leroux et Boyer, tom. ii. p. 669.)

Subsequently to this period, it appears that my relative met with a number of similar cases, for in his Cours de Médecine, in the college of France in 1823, he speaks of hypertrophy of the brain in terms which prove that it had, more than once, fallen under his observation. "This alteration, he observes, is sufficiently common in children, more rare in adults. It is characterized by a very great degree of firmness of the cerebral mass, and by a considerable flattening of the circumvolutions of the brain, although the ventricles of this organ contain little or no serum. It

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* M. Laennec states in a note, that the present article was written a considerable time previous to the appearance of the paper by Dr. Dance, translated for the Journal of Foreign Medicine, vol. ii. p. 409. The cases detailed by Dr. Dance, he observes, are so conclusive, that the publication of those which follow, might have been dispensed with, had he not thought that upon a new and controverted subject, we could never possess too many materials.

may develop itself slowly; but more frequently it occurs as an acute affection, the symptoms of which are very analogous to those of hydrocephalus. It appears to be neither the result of inflammation, nor of excessive action of the organ, for it is not more frequent in studious persons, than in others; and it is rare that inflammation is even the occasional cause of hypertrophy, unless in the case of the tonsils. In almost all other organs, inflammation protracted or frequently repeated, ultimately induces atrophy."

These brief observations, the correctness of which is not confirmed by any detailed relation of facts, have awakened without satisfying the attention of practitioners; and by many physicians, hypertrophy of the brain is a disease, the existence of which is still considered problematical.

Four years ago, however, a very interesting case was published by M. Scoutteten in the *Archives Génér. de Médecine*, tom. vii. p. 44. The subject was a child, aged five years and a half, with a very voluminous head and a low degree of intelligence, who died on the 16th day of a moderate febrile affection, during which he had presented no cerebral symptoms, other than a degree of drowsiness, which readily left him when his attention was excited. On the day of his death, there suddenly supervened, without any evident cause, a complete abolition of the intellectual faculties. On opening the body, M. Scoutteten remarked that the brain was very voluminous, and of firmer consistence than ordinary, without presenting any other alteration. The anormal development of this organ appeared to have taken place principally at the superior and posterior part of the hemispheres, for it required an incision of nearly three inches in depth to reach on this side the lateral ventricles, while beneath them the cerebral substance was not more than an inch in thickness; a very minute quantity only of reddish serum was found in the ventricles.

This description, which I have transcribed almost verbatim, appears to me to remove all doubt of the existence of cerebral hypertrophy. It is to be regretted, however, that M. Scoutteten has omitted to notice the flattening of the circumvolutions of the brain, coinciding with the almost total vacuity of its ventricles, a circumstance which I regard as the surest anatomical character of the alteration, and which ought to have taken place in this instance. It is to be regretted also, that he was unable to connect more positively some one of the symptoms observed during life, with the alteration found after death; but the physician from whom he received the history of the disease, (for M. Scoutteten was present only at the opening of the body,) assured him that he had neither observed deep stupor, nor convulsive nor automatic movements, nor any of the symptoms indicative of strong compression of the brain. It is, notwithstanding, probable, that the complete abolition of the intellectual faculties supervening suddenly a few hours before death, had been preceded, accompanied or followed, by some other serious symptoms, the rather that besides the hypertrophy of the brain, there existed in this subject evident traces of inflammation of the meninges.

Like that of M. Scoutteten, the following cases will hardly do more than point out the anatomical characters of hypertrophy of the brain. It will be seen, however, that this lesion has constantly coexisted with convulsive or epileptiform symptoms. I may even say, that I have never seen a case of fatal epilepsy in which there did not exist an evident hypertrophy of the brain. It is true, that the cases of this kind which have fallen under my observation have all been examples of *saturnine epilepsy*, except that which forms the subject of my first observation; and I would not, therefore, be understood to say, that in ordinary epilepsy the same lesion will be constantly found. It appears besides, from the researches of MM. Boucher and Cazanvieilh, (*Arch. de Med.* 1825 and 6,) that congenital epilepsy, or that which dates from a remote period, is connected with very different encephalic alterations. I observe, nevertheless, that *induration* of the cerebral substance, one of the anatomical characters of every hypertrophy, holds the first rank in their clinical table; and although I concur with them in the opinion that this induration may be conjoined with chronic inflammation, I cannot but consider this fact as very favourable to the opinion which I have just emitted.

Case 1. Adelaide Noyau, a cook, aged twenty-two years, was affected with a slight catarrh, in the beginning of December, 1822; the cough at first was unfrequent, and unaccompanied by pain or expectoration. After a continuance of eight or ten days, the catarrh increased in severity; the cough was attended by a sensation of heat and pain, fixed behind the sternum; to which was added frequent shiverings, and an almost constant fever.

On the 25th November, she was brought to the hospital of Necker, in the following condition; respiration hurried, cough frequent and painful, recurring in paroxysms, expectoration slightly viscous, decubitus easy on both sides, pain opposite the bifurcation of the trachea, a sense of heat throughout the breast, skin hot, dry, and somewhat florid, pulse frequent, full and quick, some degree of anxiety, obtuse cephalalgia; there was no gastric derangement.

The chest sounded well throughout; the respiratory murmur was weak in nearly its whole extent, and accompanied by a mucous, and occasionally by a sibilant râle. The pulsations of the heart presented nothing remarkable. A pectoral ptisan and some mucilaginous mixtures were prescribed.

During five days the disease, or rather the indisposition of Adelaide, appeared to grow somewhat better, but it suddenly changed on the fifth day, (1st December,) and without having experienced any precursory symptom, she was found in the following condition; sudden and complete loss of consciousness, dila-

tation of the pupils, fixity of the eyes, contraction of the eye-brows, slight contraction of the right arm, complete insensibility, pulse slow, respiration less hurried than on the preceding evening, but *bruyante* and unequal, no cough, expectoration, or tenderness of the abdomen under the strongest pressure, a slight degree of meteorismus, urine scanty and red, constipation. Prescription; *six leeches to each temple, a blister to the neck, sinapisms to the feet, infusion of orange flowers with tartarized antimony*, gr. xij.

Neither vomiting nor alvine evacuations had occurred in the evening; her condition remained the same; there was only a rather greater degree of contraction of the right arm, the left also began to be somewhat rigid.

During the night the patient vomited twice.

On the 2d December, both arms were strongly contracted. The patient, interrogated, appeared to possess some degree of understanding.

Prescription: *infusion of orange flowers with tartarized antimony*, gr. xv. which was taken in the course of the day, without any apparent effect.

The next day, the patient replied correctly, but in monosyllables, to the questions which were addressed to her; she could easily distinguish objects; the pupils were less dilated, and the eyes less fixed, but the arms still remained strongly contracted; the patient complained that she was unable to extend them. She now felt pain on pinching the skin, which the evening before was completely insensible.

Prescription: *Tartarized antimony*, gr. xviij. which produced no evacuation.

Dec. 4th. All the symptoms of cerebral affection had disappeared; the pupils only, remained somewhat dilated; the eye-brows were still contracted and drawn together, giving to the countenance an expression of sadness and disquietude; there was a slight degree of fever, the pulse continued slow. The tartarized antimony was continued in the dose of eighteen grains.

Alarmed at an expression which fell from one of the students, present at the visit on the 7th, the patient relapsed on the evening of the 8th, into her former condition. For the first time, she experienced during the day, nausea after each glass of the tartarized ptisan; but from the commencement of this treatment, it had been necessary to employ enemata to evacuate the bowels.

On the morning of the 9th December, the patient had recovered her consciousness. The symptoms above alluded to, continued only six hours; after their cessation, a profuse serous diarrhœa supervened, accompanied with severe griping. The quantity of tartarized antimony was reduced to six grains. During the day and the following night she continued tranquil.

At two o'clock P.M. of the following day, the patient, who had just drank a glass of the ptisan, suddenly cried aloud, threw her head backwards, became pallid, and was agitated by convulsive movements; the respiration was hurried; the pallidity of the countenance was successively, and in a very few moments, replaced by a livid redness and a yellowish tint; the pulsation of the arteries and heart became obscure, and soon ceased altogether; the extremities lost their sensibility and motility; respiration grew slow and stertorous; and death soon closed the scene.

Autopsis. The pia-mater was injected, and its tissue infiltrated by a small quantity of serum. The cerebral circumvolutions presented in both hemispheres a remarkable flattening, which led to the supposition that there was a large quantity of fluid extravasated into the ventricles. The substance of the brain was so firm, that it regained its former state, after having been strongly compressed.

The lateral ventricles scarcely contained a drachm and a half of serum each; there was no extravasation at the base of the cranium. The tuber annulare and the cerebellum were softer than the brain. All the sinuses of the dura mater were strongly engorged with blood.

It is unnecessary to follow M. Laennec in his examination of the thoracic and abdominal viscera; they presented few and unimportant morbid appearances. The case above detailed, he observes, is alone sufficient to establish the reality of hypertrophy of the brain. I cannot, indeed, imagine, how we can consider as healthy, a brain, the circumvolutions of which were greatly flattened, and its substance of such firmness as to present a kind of elasticity. Now, the first of these circumstances evidently supposes a compression, exerted by the bones of the cranium upon an organ which had become too large for the cavity in which it was contained; and since it cannot be explained by the extravasation of a great quantity of serum into the ventricles, it must be referred to an expansion of the cerebral substance itself. Here, therefore, we find the two anatomical characteristics of hypertrophy—increase of volume and of density. I am aware that these two circumstances are also met with in organs affected with inflammation, prior to the commencement of suppuration; but the inflammatory induration is always accompanied by an unusual coloration: and, in the present instance, although the sinuses of the dura mater were engorged with blood, the brain presented no marks of congestion: it is even probable, that the quantity of blood circulating through it was less than ordinary. M. Lallemand, high authority on this subject, positively denies that there is any augmentation of density in an inflamed brain; (*Recherches Anatom. Pathol. sur l'Enceph.*) and I concur with him in opinion, that the true anatomical characteristic of cephalitis is drawn from the softening of the cerebral substance,

Perhaps an argument against the existence of hypertrophy of the brain may be drawn from the rapidity of its development. It is true, that in other organs hypertrophy takes place, in general, slowly. There are, however, great

differences in this respect, differences which appear to bear a constant relation to the texture of the organ. Thus the parenchymatous viscera, the liver, spleen, thyroid gland, &c. undergo this alteration in much less time than the heart and other muscles. Now, the nervous substance is, of all our tissues, that which has the least cohesion; it holds a kind of middle station between the solids and fluids, and therefore ought to participate, in some degree, in the rapidity of the nutrition of the latter.

We have seen above, that Professor Laennec attributes to hypertrophy of the brain the same symptoms with hydrocephalus; this is also the opinion of M. Scoutteten, but I believe, that on this point, they are both mistaken. In the case just mentioned, there were present, it is true, some of the symptoms of hydrocephalus, (dilatation of the pupils, fixity of the eyes, contraction of the eyebrows, &c.;) but at the same time, we have the symptoms regarded by the learned Professor Lallemand as pathognomonic of inflammation, (suddeness of invasion, abolition of sensibility, contraction of the superior extremities;) lastly, life was terminated by a genuine epiliptic paroxysm, for I know not what other name to give to the assemblage of symptoms, which supervened on the day of death. The same circumstances will be observed in all the cases about to be detailed.

Before going farther, however, I may be permitted to make a few observations on the treatment of the case above mentioned. In the opinion of many physicians, the employment of tartarized antimony *à haute dose*, is still considered as an useless temerity, even though it be not productive of dangerous consequences. I do not wish to defend here, the counter stimulating practice, of which I am far from being an advocate, and I hasten to observe, that I should certainly not have prescribed the tartarized antimony on my own account, in the present instance. But I am pleased to have it in my power to state, that it produced no unpleasant symptoms during life; that through its influence the disease seemed to be twice arrested in its progress; and, that after death, the gastro-intestinal mucous membrane presented only a few punctations, such as are found in almost all acute diseases. It would not be difficult to bring forward a great number of facts analogous to the above, collected in the hospital of Necker, or in that of la Charité, when I held there the office of Chef de Clinique de la Faculté de Médecine. I shall refer those who may be desirous of further information on this subject, to the extracts published by my friend M. Bayle, in his *Bibliothéque de Thérapeutique.*

Case 2. Jean Baptiste Gournay, aged 44 years, employed in a manufactory of white lead, was admitted into the hospital, April 24, 1823. He had complained for several days of a dull colic, of which he had already suffered several attacks. The absence of fever, the very great paleness of the tongue, and the profession of the patient, left no doubt as to the cause of the disease, and the treatment adopted at la Charité was, in consequence, directed, with some modifications.

The patient bore the remedies perfectly well, and by the eighteenth day, the pain had almost entirely disappeared. In the afternoon of the succeeding day, he had an attack of epilepsy, with entire loss of consciousness. The paroxysms, with a few scarcely perceptible remissions, continued throughout the night. On the 20th, the patient still remained unconscious; his countenance, which habitually had an air of harshness almost approaching to ferocity, now only expressed pain and anguish; his lips were colourless, the mouth filled with foam, the eyes half closed and divergent, the pupils fixed and dilated, respiration stertorous, pulse almost insensible, the muscles of the arm paralyzed.

Leeches were directed to the temples, and twelve grains of tartarized antimony to be taken in six half-glasses of orange flower water; but there was not sufficient time allowed to carry the prescription into effect—death took place at one o'clock, P.M.

Autopsis—eighteen hours after death. The brain filled exactly the cavity of the cranium. The meninges were very pale, and the internal surface of the arachnoid was shining, yellowish, and slightly unctuous to the touch, as if lined with a very delicate layer of albumen.

The cerebral circumvolutions were flattened to such a degree, that the surface of the brain was perfectly smooth. The substance of the brain was, in general, remarkably firm, and when sliced did not permit the escape of a single drop of blood. The cortical portion alone presented towards the posterior and inferior portion, in a space about as large as a two-franc piece, a well marked rose colour, and at this part its consistence appeared to be somewhat less firm than in the rest of the organ.

The lateral ventricles, and the third and fourth ventricles, contained only the very minute quantity of limpid serum which is found in the state of the most perfect health. The cerebellum and tuber annulare presented no alteration.

The lungs were large and free from adhesion; their tissue, elastic and perfectly crepitating anteriorly, was infiltrated in their posterior half by a considerable quantity of sanguinolent and frothy serum. The bronchial lining was, in general, paler than ordinary.

The mucous membrane of the stomach and intestines was of a dull white colour, analogous to that of wheaten dough; not a single injected capillary could be detected, and its paleness continued the same from the cardia to the anus. It appeared generally a little thicker than usual, but it was not softened, at least in any appreciable degree. The liver, spleen, and mesentery, were sound.

It would, I think, be difficult to desire a greater resemblance between organic alterations observed in different subjects. We shall find, moreover, in all the cases, this ex-

treme flattening of the cerebral circumvolutions, connected with a vacuity, more or less complete, of the ventricles, and with a notable augmentation of density in the substance of the brain. I will only remark here, for the sake of those who may be disposed to see in all these cases, the first degree of cephalitis, the kind of ecchymosis accompanied with slight softening, situated on the surface of the left hemisphere. Here indeed were the characteristics of inflammation; but was this very circumscribed inflammation a cause, an effect, or only a complication, of hypertrophy? I am inclined to the latter opinion.

The symptoms observed in Gournay's case, did not differ materially from those which occurred in the last moments of Adelaide Noyau. In both instances, they were those characterizing a genuine epileptic paroxysm: sudden loss of consciousness, tetanic convulsions, head drawn backwards, divergence of the eyes, turgescence, lividity, and paleness of the face, loss of sensibility and motion, and, in the second case, frothing at the mouth. The resemblance will be found still more striking, in the cases yet to be detailed.

One word relative to the condition of the mucous membrane, in the case last mentioned. Its uniform and universal paleness surprised some of those who assisted at the examination It was not anticipated, after the employment of such stimulating remedies as the eau bénite de la Charité, the purgative enema des peintres, the pills of gamboge, &c; but as this paleness presented a shade, differing from that of healthy membrane, as there was, moreover, an evident thickening of structure, it was by them referred to inflammation. I know not whether this appellation can de given to a simple shade of colour, accompanied by a slight increase in the volume of the tissue; I am more inclined to consider it an alteration of nutrition, a hypertrophy. But what to me appears indubitable, is, that this alteration, by whatever name it may be designated, was not the effect of the treatment, but of the saturnine emanations to which the patient had been subjected. It is well known that these emanations constantly occasion paleness in the individuals exposed to them, and in the present instance, we observe this want of colour not only in the mucous membrane of the intestines, but of the bronchii also, and even in the parenchymatous viscera. I regret that I did not observe the state of the muscles; they would, I am persuaded, have been found paler than usual.

Case 3. Jean Mailler, forty-three years of age, and of very robust constitution, had been subject in his youth to rheumatic pains in the extremities. He had served ten years as a marine, and during all that time had enjoyed excellent health, with the exception of a syphilitic affection, of which he had been well cured. Returning home, at the age of thirty years, he again suffered from pains in the joints, to such a degree that he was obliged to relinquish his employments. About the beginning of June, 1825, he engaged as a labourer in a manufactory of white lead. From this period he became habitually costive, although in other respects his health was good. But after the lapse of five months he was suddenly attacked with pains in the joints, which in a few days rendered him completely impotent. His comrades carried him to the Hôpital Beaujon, from which he was discharged cured, after six weeks of repose and of mild regimen. He resumed his employment, and very soon afterwards, the constipation reappeared.

On the 1st of January, 1826, while breakfasting with his companions, he suddenly fell down in a state of unconsciousness, and remained in this condition nearly three hours. When he recovered his senses, he was surprised to find himself in bed, and remembered nothing of what had passed.

Three days after this accident, (Jan. 4th,) he was admitted into la Charité, in a state of oppression and stupor analogous to that of apoplectics. His legs trembled and were very feeble, although their sensibility was unimpaired; articulation was embarrassed; his ideas confused; head heavy, and painful above the orbits; his pulse was full, without frequency; face flushed; and the abdomen completely indolent.

The treatment employed in la Charité, for colica pictonum, was immediately put in practice. For a few days the patient seemed to improve; his head became freer, articulation more distinct, and the trembling of his legs diminished; but after a little while, the tongue again became embarrassed, and on the 10th of January, the patient had a violent paroxysm of epilepsy, characterized by sudden abolition of sense, rigidity and convulsive movements of the extremities, stertorous respiration, and foaming at the mouth, &c.

To the symptoms of epilepsy, succeeded a delirium so violent, as to require the employment of the straight jacket. A blister was directed to the nucha, and an antispasmodic mixture was added to the treatment already in use.

The delirium continued through the 11th and 12th of January; on the 13th it began to subside, and the patient became so perfectly reasonable, that on the 15th and succeeding days he was employed in the hospital as assistant nurse. The alternate use of purgatives, opiates, and sudorifics, was still continued.

At 11 P.M., on the 20th of January, he had another attack of epilepsy, followed by many others which occurred in rapid succession during the remainder of the day and the succeeding night. In the intervals, he remained in a state of profound coma; there was resolution and almost complete insensibility of the left arm, rigidity only of the right.

21st. Coma, stertorous respiration, foaming at the mouth; pulse frequent, irregular, and weak; death.

Autopsis, thirty-six hours after Death.—The meninges were slightly injected; the circumvolutions of the brain were so much flattened that they seemed to be almost entirely effaced.

The ventricles did not contain a drop of serum; their parietes, which were remarkably dry, were sunken, and apparently compressed one against the other. The cerebral substance presented its ordinary colour and consistence, a slight sanguineous injection only was observed. The cerebellum offered nothing remarkable. The pineal gland contained some small calculous concretions.

The lungs were strongly connected to the ribs, by very firm cellular adhesions; they were engorged with blood and serum, especially at their posterior part; their tissue, however, was still crepitating. In the left lung several small concretions of a reddish-yellow colour were observed, which at first sight might have been confounded with incipient tubercles, but they differed in colour, and were not so firm as the latter; they appeared foreign to the pulmonary tissue, in the middle of which they were situated.

The heart was intimately connected to the pericardium, by a cellular membrane, of ancient date. On its anterior surface was a rounded tumour, about the size of a hazel nut, of an almost osseous consistence, situated between the heart and the serous lamen of the pericardium, to which it was so strongly adherent, that it could not be separated without laceration. The omentum was engaged in the right inguinal ring, and formed a small hernial tumour there. The intestines presented nothing remarkable either in their disposition or colour.

Along the small curvature of the stomach, the coronary vein and its divisions were prominent, and had the appearance of small, whitish, elastic, and semi-transparent chords. This appearance arose from a gas which distended all the veins, and which could be displaced by pressing them slightly. On opening the stomach, a similar gaseous injection was observed in some submucous venous ramifications. The gastric mucous membrane presented here and there, a slight punctated redness—it did not appear to be either softened or thickened; the mucous membrane of the intestines was pale and sound in its whole extent.*

It is almost unnecessary to advert to the uniformity in the description of the state of the brain, in these three cases. In the last, with the exception of their intermittence, the symptoms were exactly the same as those presented by the second; in this instance death took place in the first epileptic attack, in the other, the patient survived till the eighth. In one, the morbid turgescence of the brain advanced with such rapidity, that a fatal compression was the immediate consequence; in the other, a similar turgescence appeared to take place in paroxysms, but continued to increase progressively in severity till death. In this way I would understand the connexion of these eight epileptic paroxysms, with the organic alterations which appeared to have induced them; and in so doing, I only apply to hypertrophy of the brain, what we sometimes observe in that of the heart and of some other organs, which present alternations of augmentation and stagnation according to the influence of the causes or treatment.

There is, in the last case, an anatomical circumstance which I must not pass by unnoticed; I allude to the presence of gas in the coronary vein and its divisions. Willis states that he observed bubbles of air between the lamina of the mesentery, in a woman who died during a paroxysm of hysteria. Another writer speaks of air enclosed in the veins of the brain (*Ephemer. Natur. Curios.*); was there any connexion between the disengagement of this gas in the veins and the epileptic paroxysms? We know that the introduction of air from without into a large vein, after some operations, has been followed by convulsions and instantaneous death. I do not believe, however, that in the present case, the gaseous injection of the coronary vein had any influence on the severity of the symptoms; but I have noted the fact, because it is rare, and therefore curious.

Case 4.*—Geneviève Cholot, aged twenty-two, was admitted into la Charité towards the latter part of February 1828, to be treated for colica pictonum, with which she was affected for the first time. For the last six months she had been employed in a manufactory of white lead—previous to this, her health had been good, and she never had the slightest symptom of epilepsy or hysteria. The colic had existed only five days, but was so severe, as to require the treatment of la Charité in its utmost extent, to remove the pain, and re-establish the peristaltic action of the intestines. On the 14th March, sixteen days after her admission, she was discharged completely cured.

At midnight, on the 30th of the same month, she was found in her chamber in a state of insensibility, with a large ecchymosis around the left eye and temple, and was immediately transferred to the hospital. Her extremities were rigid, cold, and agitated from time to time by convulsive motions; pulse small and miserable; respiration very feeble, countenance pale, eyes unequally open, now fixed, now rolling in their orbits—in a word, she was almost in an expiring condition. We learnt from one of her friends, that since her discharge from the hospital, till the morning of the preceding day, she had preserved her spirits, appetite and health. On the morning of the 30th March, she was attacked, while at work, with an epileptic paroxysm which lasted about half an hour. When she recovered her senses, she stated that it was the first time she had had such an attack. She was carried home

* Communicated by Dr. Vyau de la Garde, at that time Chef de Clinique de la Faculté de Médecine à l'Hôpital de la Charité.

* Communicated by Dr. Miquel, Chef de Clinique de la Faculté de Médecine à l'Hôpital de la Charité.

and left there, about one o'clock, P. M.; from which time till her admission, no further information respecting her could be obtained.

She appeared to improve the first day of her admission, under the influence of frictions with ammonia upon the extremities, blisters to the legs, and some spoonfuls of *eau de casse avec les grains.* This emetic induced nausea and vomiting, which facilitated the removal of the obstruction of the bronchii. In the evening, although consciousness had not returned, she appeared much improved; her pulse was better, the extremities had regained their temperature, and the expression of her countenance was natural. This melioration, however, was of short duration; during the night she had repeated epileptic paroxysms, which were renewed again on the first of April. A violent trismus preventing her from swallowing any medicine, she was actively purged by 15 drops of croton oil applied in friction around the umbilicus. She died the following day in an epileptic paroxysm.

Autopsis, twenty-four hours after death.—On opening the cranium, the first thing which drew the attention, was the complete flattening of the cerebral circumvolutions. The cerebral mass firm, dense, and heavier than ordinary, appeared too large for the osseous cavity from which it had just been removed, and when compared together, it was scarcely conceivable how it could have been contained in it. The meninges, transparent and healthy, could readily be detached, but the flattening continued after their removal. The ventricles were reduced to half their ordinary capacity; they contained no serum, and their sunken parietes nearly touched each other. The substance of the brain preserved its natural colour; it was firm and very slightly moist.

The thoracic and abdominal viscera were perfectly healthy.

This case bears a very strong analogy with the second, both in its symptoms and morbid appearances. It will be seen that I have always met with hypertrophy of the brain after a fatal paroxysm of epilepsy, and that in three out of four cases, this epilepsy arose from saturnine emanations. Several other cases drawn up by M. Miquel, and which I have not inserted, because they did not fall under my immediate observation, are all confirmatory of this remark; he will, doubtless, make them public, and thus more completely remove all doubt respecting the reality of a remarkable augmentation of the volume of the brain in such cases.

We read, however, in the *Clinique Médicale* of M. Andral, a case apparently contradictory to those above mentioned. A painter was admitted into la Charité with colica pictonum, and died suddenly, after having had, a few days before, a violent paroxysm of epilepsy. No appreciable alteration was found in the whole extent of the cerebro-spinal system. I will not venture to say that so able an observer must have been mistaken. He has stated that the ventricles contained only a very minute quantity of serum, and if the cerebral circumvolutions had been greatly flattened, it could hardly have escaped his observation. But when the anatomical characters of the alteration of an organ, consist only in an exaggeration of the normal condition of that organ, they are easily liable to be overlooked; and we know that prior to the publication of the *Traité de l'Auscultation Médiate*, few authors had observed the enlargement of the pulmonary cells in certain kinds of dyspnœa, although this circumstance is incontestable, and of frequent occurrence.

The notable diminution of the capacity of the cerebral ventricles, in the case last mentioned, cannot have failed to attract attention. This diminution must be constant in hypertrophy of the brain; but it is necessary that it should be equally evident as in the present instance, otherwise its existence might easily have been denied. It is not the first time this diminution has been observed; the *Ephemerid. Natur. Curios.* contains the following note, which I translate literally. "Dec. 28, 1649, a young man, æt. 16, of obscure condition, and subject to epileptic attacks, died in the hospital of Leyden, during a paroxysm of the disease. Dr. Adrien Falcobburg, a distinguished anatomist, opened the body, but was unable to discover any manifest cause of death, unless it were that the *ventricles of the brain were too narrow.*" I have cited entire, the above sketch, because it appears to me strongly to corroborate my own cases. Is it not, in fact, more than probable, that this *narrowness* of the ventricles was co-existent with a flattening of the cerebral circumvolutions, and increased density of the substance of the brain?

Case 5.*—Thérèse Guillemin, aged 13 years, of limited capacity, but not idiotic, small stature, otherwise strong, and enjoying general good health, towards the termination of the winter and beginning of the spring of 1810, had a slight attack of mollities ossium, accompanied with anorexia, slow fever, and chronic diarrhœa. Chalybeates, bitter tonics, antiscorbutics, and appropriate exercise, removed these symptoms after the lapse of three or four months. The curvature of the spine, which had never been very strongly marked, diminished, and the child recovered her health entirely; except that from time to time, she still complained of headach and vertigo.

Towards the middle of January 1811, she had a bilious attack with fever, for which I directed an emetic, which she was to take on the morning of the 22d.

An hour before taking it, she suddenly fell to the ground without consciousness, eyes open, fixed, and the extremities slightly rigid; the mixture was given notwithstanding, and after having vomited, she recovered her senses; but in two or three hours she relapsed into the same condition.

I saw her the next day; she remained in the same state; the pupils were dilated, pulse

* Extracted from the manuscripts of the late Professor Laennec.

still frequent. *A blister was directed to the nucha, and the infusion of arnica with tartarized antimony to be taken.*

24th. Her pulse was slow; in other respects her condition was unchanged.

25th and 26th. Same state; pulse slow, extremities somewhat rigid, but mobile and without tetanus.

27th. *Two blisters to the legs.* Same state.

She died on the 28th.

Autopsis, thirty-four hours after death.—Permission was granted to open the head only; it presented a flattened form, from above downwards, elongated in a point from before backwards.

The cranium was very thin, scarcely a line in thickness in any part of the vault; the vessels of the pia mater were engorged with blood; the circumvolutions of the brain were very much flattened, especially at the upper part of the hemispheres.

The whole substance of the brain was remarkably firm, its consistence was perhaps double that ordinarily met with in subjects of this age; when pressed between the fingers the medullary substance could not be crushed without a considerable effort, there even remained a part which continued limber and could not be reduced into pulp.

About an ounce and a half of limpid serum was found in each lateral ventricle; they appeared rather large in proportion to the entire volume of the brain. Serum was also found in the other ventricles and at the base of the brain.

The cerebral nerves possessed a remarkable degree of firmness, and ruptured with such difficulty, that it required a force sensibly greater than ordinary to remove the brain.

Although this case is incomplete, and differs considerably from those which precede it, I have thought it might to cited as an instance of hypertrophy of the brain; I think it even calculated to point out this alteration, when it is conjoined, as was here the case, with genuine hydrocephalus. It is remarkable, in fact, that at the same time the ventricles were filled with serum, the cerebral substance was firm, consistent, and could scarcely be reduced to pulp by pressure. The contrary is always observed in simple hydrocephalus; in such cases, far from augmenting in density, the cerebral substance seems bordering on diffluence.

We may affirm, therefore, from this character alone, that the flattening of the circumvolutions was not wholly, and perhaps in no degree, the result of the ampliation of the ventricles. It is to be regretted, that the distance intervening between the ventricles and the superior surface of the brain was not ascertained in this instance, as in the case of M. Scoutteten; judging from the elongated and pyriform shape of the head, however, it must have been very considerable. I have not sought, moreover, to discover in this case, what did not enter into the mind of its author. The manuscript of my relative is entitled *Accroissement de Nutrition du Cerveau*, and although it dates from so remote a period, it well merits some credence, emanating from such authority.

In this instance, the epileptiform symptoms observed in the other cases were not met with, but there were some convulsive motions accompanied with an almost tetanic rigidity of the extremities, and these, it appears to me, should be referred to the alteration of the nervous pulp, rather than to hydrocephalus, which ordinarily does not present such symptoms.

From the facts above detailed, the following conclusions may, I think, be legitimately deduced.

1st. The brain, like every other organ, is susceptible of a notable augmentation of volume and density, or, in other words, of true hypertrophy.

2d. The anatomical characters of this hypertrophy consist in a very great firmness of the cerebral mass, and a marked flattening of the circumvolutions of the brain, a flattening which coincides with the complete, or very nearly complete, vacuity of the ventricles of this organ, and sometimes with a notable narrowing of these ventricles.

3d. This alteration always coincides with epileptic or epileptiform symptoms.

4th. It develops itself with much greater rapidity than any other hypertrophy, a circumstance which approximates it to the inflammatory congestions, and appears to depend upon the organization of the tissue in which it is seated.

5th. The causes of colica pictonum appear to have a very great influence on the development of hypertrophy of the brain.

From the London Medical Gazette.

ON THE SPECIFIC EFFECT OF ATMOSPHERIC POISON ON VARIOUS STRUCTURES OF THE BODY, *as connected with the production of Disease—especially Fevers.* By Edward Seymour, M.D.

(Concluded from page 200.)

Fever in which the Miasma or Poison of the Atmosphere acted immediately on the Brain after being received into the Circulation.

The affection of the nervous system in fever naturally attracted early the observation of pathologists; and the frequent cases in which after death disease was discovered in the brain and its membranes, led to the conclusion that the origin of fever was to be sought in inflammation and alterations in the structure of parts lodged within the cranium. It is true that it did not escape the observation of these physicians that it occasionally happened that no trace of disease was to be found on examining these parts after death.

Without seeking for disease in other parts which might give rise to secondary disturbance of the nervous system as severe as when primary disease existed in the brain, physicians endeavoured to explain the anomaly of the same derangement of functions existing with

or without apparent alteration of structure, by alleging that in the second case a change in the cerebral substance really occurred, but was too nice and minute for human faculties or human observation to discover, and that probably the question would be entirely set at rest when the improved state of microscopic instruments enabled the physician to examine these parts with accuracy.

It is singular that this argument, employed to prop the theory of Drs. Ploucquet and Clutterbuck,* and animadverted on in strong and just terms by Dr. Beddoes in his treatise on Fever, should have been recently revived by Mons. Broussais, to support a doctrine entirely opposed to it; alleging that in the case of fever in which ulcerations of the small intestines are not observed, it arises not from the absence of the organic lesion, but the imperfection of our sight in estimating minute changes of structure.

I have endeavoured to show in the preceding papers that poisons received into the circulation from the atmosphere act as known mineral and vegetable poisons do on definite structures of the body; inflammation and lesion of the membrane lining the bronchi being the direct consequence of the poison of the influenza or epidemic catarrh; inflammation and lesion of the small intestines, the immediate consequence of the poison of the bilious or autumnal fever of temperate climates received into the circulation. The disturbance of the nervous system in such cases being the result of the injury of parts essential to life, acutely diseased; that is, so rapidly injured, that parts at a distance have not been able to become accustomed to an alteration in the relation of functions, which would scarcely have suffered under slow or chronic disease.

For many years physicians were so satisfied with seeking in the brain for the alteration either as the cause or consequence of disease in all fevers, that, with the exceptions mentioned in a former paper, only a cursory view was given to the numerous and important viscera of the abdomen and chest; and the accurate observation of the mucous lining of the intestines has until very recently indeed been almost wholly neglected. I recur more frequently to this fact, because it shows the difficulty of estimating justly the epidemic diseases in which the brain and its membranes were primarily affected. There are numerous histories of cases in which severe lesions were found of parts within the cranium, but nothing is said of the state of other viscera. In modern cases very accurate accounts are given of the state of the viscera in all the cavities: hence we can reason on the causes of disease in the latter examples, but not in the former.

There are various appearances in the brain and its membranes, presented after death, in those who die of fever from the primary influence of miasmata, or atmospheric poison, on these parts, after being received into the circulation.

In the majority of cases there is increased vascularity; the vessels of the pia mater are gorged with blood; an unusual quantity of fluid is found in the ventricles; and on cutting into the substance of the brain, a great number of bloody puncta from the divided vessels present themselves to view. Sometimes, in addition to these, a thin layer of semifluid lymph is observed beneath the arachnoid membrane; and in very severe cases, in which, during the course of the disease, vision has been either diminished or destroyed, lymph has been discovered at the base of the brain, or round the origins of the optic nerves. In much rarer instances, again, the lateral sinuses have been observed to be obliterated after inflammation to a greater or less extent; and abscess in the cerebellum, not communicating with the diseased vein but formed in its vicinity, (as abscesses are formed in other parts of the body in the neighbourhood of an inflamed vein,) has been observed.

With such appearances after death, considered in relation to violent disturbance of the functions of the brain during life, no doubt can exist on the mind of the physician as to the cause of the disease. In similar cases, likewise, (and I have seen many such in hospitals,) no alteration of structure was to be discovered in the lungs or intestinal canal. They were true cases of fever from primary disease in the brain.

The diagnosis of fever from primary disease excited by the atmospheric poison acting on the brain through the medium of the circulation, from the fever with deranged cerebral functions, arising from the injury of parts at a distance, is extremely difficult; for, as I have already remarked, the disturbance of the nervous system is often fully as great, where the disease is situated in the small intestines, as when produced in the brain itself; but, although the diagnosis is difficult, it is not the less essential, as the treatment of the two cases is widely different.

The principal characteristics of the disease we are considering, are, headach, costive bowels, through which, if a passage be obtained, scarcely any fæces are observed, the evacuation consisting entirely of the medicine, with some mucus from the bowels. There is considerable trembling and great sensibility of the surface. If pressed on the abdomen, sense of pain is produced; but a similar sensation is produced by touching the muscles of the leg, or thigh, or arm: the whole sense of touch seems to be morbidly excited. Early in the disease the pupils of the eyes are contracted to a minute point, and there is a marked expression of hurry in all the patient does or requires: with this there is sometimes early delirium, but more generally the senses are collected; but aberration of mind is observed on some trivial subject, often the first indication of the severity of the disease. There is present, thirst, nausea, heat of skin, anorexia, or occasionally depraved appetite, a longing for food, which when presented, is rejected with loathing. The eyes are brilliant and suffused. The

* Beddoes on Fever, page 131.

symptoms proceed, until, sometimes suddenly, often when unexpected, intense pain is complained of, with screaming, tossing of the hands, rolling of the head, partial loss of sight, stupor alternating with delirium, involuntary discharge of fæces and urine, subsultus, floccitatio, and death.

There is, as in the case of disturbance of the nervous system from injury of parts at a distance, no observable remission: the duration of the symptoms of excitement of course vary; in very severe cases four days are sufficient to determine the disease, but the most ordinary period is about three weeks, which has, perhaps, given rise to the popular name of one-and-twenty day fever, a name often applied to diseases different in duration, cause, and danger.

The distinguishing marks of fever, from primary affection of the brain, from fever with disturbed functions of the brain with injuries of distant parts, may be drawn from the costive state of the bowels, the contraction of the pupil, the trembling of the hands and arms, the morbidly excited sense of touch, and often of taste, the absence of more pain in the abdomen than in other parts of the body, the aberration of mind, generally to be traced on particular subjects before it becomes general, pain in the head, often confined to one spot, and very acute, and the pale, haggard, and distressed features of the patient, distinguishable from the flushed and changing colour of the countenance in fever from abdominal disease, and by the absence of marked remissions.

Still it must be allowed that the disturbance of the nervous system is in many respects common to each form. There is subsultus, muttering delirium, sighing, moaning, present in both: it is only by a very accurate history and careful observation that we can establish which part has been primarily attacked, to which our essential mode of cure is to be addressed, while we palliate symptoms which may be believed to have arisen secondarily.

In considering the treatment of this form of disease, we shall, I think, find a clue to the cause of the great disparity of opinion which has existed among physicians on the subject of blood-letting in fever. Where the impression of the morbid poison is directly on the brain, early and repeated blood-letting is necessary, and mercury is to be given in such quantities as will affect the system, and change the action of vessels which would terminate the inflammation by the effusion of water into the ventricles, or lymph within the membranes. Before the pressure of the distended blood-vessels is taken away, the bowels are entirely torpid, the secretions over which the nerves preside are not formed from the blood, and any attempt to restore them by violent or active purgatives, *before the pressure is removed*, appears to me to add a fresh stimulus to the system, and aggravate in a great degree the very evil it is intended to alleviate. On the other hand, in remittent fever, where the disease is situated in the small intestines, and the disturbance of the functions of the brain secondary to the injury of this important part, venesection, except under very particular circumstances, does harm. It does not relieve the disease, but it lowers the patient, rendering him less equal to the administration of remedies necessary to promote the gradual cure of parts rapidly injured, and whose restoration must be of long duration. The patient under such evacuation of blood does not sink to the point we wish or reasonably expect under its use in phlegmonous inflammation, but far below it, and it not unfrequenly happens that a patient in these circumstances, after a full bleeding, falls so low as not to be roused, except by the use of strong stimuli, and has then to pass through a dangerous and protracted illness.

It is only from a wish not to draw out this paper to an unreasonable length, that I do not load it with cases; it is sufficient to say, that I allude to no one point of practice which has not been illustrated under my own observation.

Here, then, is the answer to those two parties who have adopted the practice of blood-letting and mercury in fever, or have arbitrarily condemned it. In cases in which the brain is primarily affected in disease, or in the catarrhal fever, with severe oppression of the respiration, venesection is necessary—it is essential. It should be employed early, largely, and repeatedly; according to the circumstances of the case, and the relief afforded. In cases of fever, with disease in the bowels, it should scarcely ever be resorted to, and then with extreme caution, even when the functions of the brain are greatly disturbed. In fever with primary disease in the brain, purgatives are injurious until the pressure be relieved; in fever from diseased bowels purgatives are always useful—often essential. They must, of course, be adapted to the particular case, and selected with care, to produce a more gradual and healthy secretion from the mucous glands. In this fever, the other remedies in the knowledge of almost every practitioner may be briefly alluded to. Cold lotions should be constantly applied to the head; and, in severe cases, ice mixed with these will be found to relieve sometimes in a wonderful degree the dangerous symptoms, reducing the increased heat, and restoring the mind to a state more nearly approaching natural tranquillity. If blisters are employed they should be used with great caution, and not until the evacuations of blood have made a decided impression on the disease.

The question of the employment of blisters to the head in fever, appears to me to be, as in the case of venesection, of no very difficult solution.

Blisters act either as direct stimulants or by revulsion. From the time of the elder Willis downwards their use has been condemned by many physicians in fever, except on the second principle, and then their application should be at a distance from the affected part.

To the nape of the neck, or still better, to

the legs, this remedy, after due abstraction of blood, has often appeared to have cured decidedly the disease of the brain; but both from respect to the opinion of the able physicians who have written on the subject and from my own observation, the application of blisters to the head itself, as a remedy for inflammatory action in the brain, appears wholly inadmissible.

But it sometimes happens, after fevers, that the functions of the brain so long excited are impaired, not from inflammatory action, or the destruction of parts, but from the absence of blood circulating in these parts—a condition similar to that which exists in children after long and wasting diarrhœa. Thus aberration of mind has sometimes existed for weeks after the disturbance of functions of the brain in fever, either from primary inflammation or secondary derangement. In such cases, a direct stimulus applied to the brain, by repeated application of blisters, has been attended with the happiest results.

If blisters, then, are applied in fever, after due evacuations, they should be applied at some distance from the affected part, on the principle of revulsion.

If to restore an increased degree of vitality to parts injured in their functions by long over-excitement (cases which are rare,) they may then be employed as near as possible to the affected part, on the principle of stimulation.

Saline medicine and sub-acid drinks are, of course, employed in this fever with the greatest advantage in the disease and of comfort to the sufferer; and the moderate use of purgatives, the action of venesection and mercury, having relieved the chief danger, will guard against a relapse.

The functions of the skin and kidneys, the disease of the brain being subdued, often return in an increased degree of activity, giving rise, in other words, to the termination of the fever by crisis.

The following occurrence, among several, sets in a very clear point of view the action of atmospheric poison on the brain, through the medium of the circulation:—

In May, 1826, I was requested to see the child of a poor man in very miserable circumstances, on a ground floor in the lowest part of Westminster. The weather was unusually warm, the room damp and stifling. The child was labouring under manifest effusion into the brain, after an illness of three weeks, described to me as fever. It is needless to say it was fatal. About a fortnight from this time I was sent for to see the father, who had headach, occasional delirium, a constant trembling, the pupils of the eyes much contracted, and costive bowels. There was great sensibility and incessant talking. His extreme poverty, and the unhealthy situation, induced me to send him into one of the hospitals, where his disease proved fatal about the sixteenth day from the first attack. On examination, there was much fluid in the ventricles and at the base of the brain, and a thin layer of semifluid lymph between the pia mater and arachnoid membrane. The viscera were healthy, and not a trace of ulceration, or indeed disease, was to be found in any part of the intestines. Two children of this unfortunate man were attacked in succession; one of ten, the other of eleven years of age: but by directing the treatment to the affection of the brain early and fully, they both perfectly recovered.

To fevers of this description are to be referred the epidemics related by Drs. Vieussieux and Matthey, as having occurred in Geneva in the year 1805. The description after death of the formation of lymph and pus in various parts of the brain, which cannot certainly occur without the utmost disturbance to the functions of other parts, or the production of fever, might satisfy the mind of the inquirer that inflammation and lesion of the brain was the immediate consequence of the absorption of the atmospheric poison.

It is possible that, at some future time, I shall resume this subject, with reference to other epidemic disorders; and I may here shortly allude to a disease whose nature (as far as report is concerned) would lead us to believe that it is an example of the poison of the atmosphere acting on a particular structure, after being received into the blood.

Accounts have reached this country of an epidemic disease which has visited Jamaica and the Island of New Providence, but more especially the Bahama Islands; affecting the joints of the body, attacking every class of persons, whether under circumstances of exposure or otherwise, and equally the poor and rich. It has not been fatal, but most extensively epidemic. As I have no personal knowledge of the disease, I should be unwilling to rely on it as an example; but, from the authenticated account sent to this country, it would appear that the poison of the atmosphere, received into the circulation, affected the synovial membranes of the body. If this be true, it is another very strong instance of the action of atmospheric poison on particular structures.

From the London Medical and Physical Journal.

REMARKS ON CERTAIN DISEASES OF THE NAILS AND THE SURROUNDING SOFT PARTS. By G. T. Burnett, Esq.

There are certain diseases of the nails, which, from the little notice they have excited, would seem to be rare, and yet which, from the cases I have already met with, I can scarcely believe to be uncommon. It is true that they do not in general endanger life: still they are oftentimes the cause of great and continued suffering. Can it be that professional pride hath led to their proscription, as too trifling to be worthy the surgeon's notice; and, by excluding them from regular, hath consigned them to empirical practice? or can it be that the unsettled treatment and unsatisfactory results of such cases, have been the cause of this apparently contemptuous silence!

so that they have scarcely, if at all, a place or name in any of our systems of nosology.

Should the following observations on one of these trifles seem worthy a page in your forthcoming Number, the influence of the London Medical and Physical Journal, which has done much for our very important, though at present imperfect, science, may probably induce some of its readers, as opportunity occurs, to turn their attention to an apparently trifling, yet exceedingly troublesome, form of *onychia*[*?*] which, I believe, is seldom, if ever, mentioned. Indeed, I scarcely know if I am justified in thus designating the cases to which I refer, as they decidedly possess not either the history or characters of the true or common whitlow. Megonychia, or Onychia ulcerata, might be less exceptionable terms; and, as Paronychia is not only the most familiar, but also the best name for true whitlow, Onychia, often used as a synonym therewith, might not improperly include the two.

The letter of your Paris correspondent, published in the Number for December last,* well describes the severe and painful operations resorted to for the cure of onychia maligna, and some of the cases thus called I cannot but think are cases of onychia ulcerata, such as I am going to describe, rather than of the onychia maligna of Mr. Wardrop. If so, the treatment I would recommend is certainly much more mild and simple, though, as far as my limited experience goes, not less efficacious.

The nails, like all other parts of the body, are subject to occasional variations in their form and mode of development, giving rise to preternatural and morbid growths: when these variations are slight, they pass unnoticed; even when greater, if they produce not much inconvenience, they are regarded as harmless monstrosities, rather than disease: when, however, the ordinary duties of organs are disturbed, and especially when pain ensues, the interference of the surgeon is demanded.

The morbid development to which the present observations more particularly refer, is that in which the nail is not only broader than natural, but the sides curve preternaturally downwards, at first compressing, and subsequently entering, the nail bed; causing, in the early stages, pain and inflammation, and afterwards ulcerations, even of a malignant kind. Sometimes the morbid development is of the nail alone, sometimes chiefly of the onythalamus, but most frequently of both: i. e. not only does the nail morbidly incurvate, but the nail bed also is preternaturally enlarged. This disease most commonly affects the feet, especially the great toes: the hands, however, are not exempt, the thumbs occasionally being thus diseased. The detail of a case, however, perhaps may prove the best description.

—— Saunders, a healthy young man, aged twenty, consulted me on account of lameness, occasioned by pain and swelling of the left foot, especially of the great toe. On examination, the toe was found inflamed, being very red, hot, tumid, and painful; the inflammation extended also towards the inner ankle, and laterally over the metatarsus: on any attempt to walk, the placing the foot on the ground produced great uneasiness, and if persevered in, "torture." The right side of the toe was chiefly affected, and from the sulcus between the nail and fillet which bounds the onythalamus there was a semi-purulent discharge; unhealthy granulations had sprung up in the ulcerated cleft; and these, with the ichorous discharge, &c. gave the disease, at first sight, the aspect of onychia maligna.

The previous history was obscure, for it had progressed much, the nail having curved considerably downwards, and the nail bed enlarged, before it produced so great inconvenience as to excite attention. He endured this state of things for some time, suffering more or less, before he sought relief; and then pursued the plan (which I remember being ordered for a similar case, when I was dresser at the hospital,) of introducing pledgets of lint into the cleft between the nail and flesh, thus endeavouring to raise the curvature of the nail, and cause it to overlap the soft parts, instead of the soft parts pressing against its edge. This plan, however, (as I remember also was the case when I dressed the patient before referred to,) caused much uneasiness, without affording any adequate relief: it was, therefore, after a time neglected, and shortly the edges of the nail excoriated the soft parts, and an ulcer was produced; and now the pain on attempting to walk was much increased. The side of the nail was then pared away, which gave some ease; and he had been in the habit, before I saw him, of cutting away the side of the nail with his penknife as far as he could reach; but, as the nail grew, its sharp edge advancing into the tender and enlarged fleshy side of the nail bed, increased the disease, the ulcerated surface became more irritable, and the ichorous discharge before mentioned was the result.

At the first glance, as before stated, this did not look unlike a case of onychia maligna; the sulcus between the nail and soft parts being ulcerated, the ulceration chiefly towards the root of the nail, unhealthy granulations sprouting up at this point, a scanty semipurulent discharge being present, and the surrounding parts in a very irritable state. But the history was totally different; for here the ulceration was the consequence, and not the cause, of the affection of the nail. The other side of the toe gave me a good opportunity, by showing a disposition to the same disease, of watching its progress, and verifying the previous details.

After reducing the inflammation by ordinary means, the ulcerated side was dressed with caustic, &c., and the nail allowed to grow its full width; after which, the attempt was again made to reduce the incurvature of the nail, by placing pledgets of lint between and under

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* Vide Journal of Foreign Medicine, Vol. III, page 313.

its edge and the soft parts; and this was also done from the beginning with the other side. Finding the inconvenience of this plan to be great, and, after a perseverance of several weeks, the benefit, if any, to be very little, some other treatment was to be thought of. Two plans would appear nearly equally feasible: either, 1st, to remove the nail, or at least the incurvating sides, with the corresponding portions of the matrix; or, 2d, to remove the soft parts into which the nail pierced. Had the nail been removed by avulsion, or destroyed by cautery, or dissected out with its matrix, as recommended in onychia maligna, (the operation in this case must have been performed on both sides of the toe, if any part of the nail was to be preserved; and,) to say the least, it would have seemed severe and painful treatment in so apparently trivial a disease. I therefore preferred the latter practice, viz. the removal of the sides of the onythalamus; and, placing the point of a catlin in the cleft, removed at once the side of the nail bed into which the nail entered. The sore soon healed, no cause of irritation being left; and the like operation was subsequently performed on the other side of the toe, with the like result.

I fear I have trespassed as far the subject will warrant on your valuable pages, and will therefore only add that, when the toe of the other foot of the same person became similarlarly affected, no time was wasted in palliative treatment, but, by removing the exuberant sides of the onythalamus before ulceration took place, I avoided by anticipation much pain and inconvenience.

Lest, however, I should be misunderstood, let me, in conclusion, state that I am far from thinking this treatment could be beneficial in cases of true onychia maligna, in which (at least as far as I have been able to perceive,) the abscess and ulceration are at and under the root of the nail, the burrowing of which produces the necessity of removing the present nail, but which, the ulceration being cured, would not be injured by the growth of a future one; and, therefore, when I hear of the necessity of dissecting out the matrix, as well as removing the nail, I cannot but think that some cases have been considered as onychia maligna, which in truth were rather onychia ulcerata; as in the former the future growth of the nail would not, and in the latter it would, if the soft parts remained, reproduce the disease.

In a case of onychia maligna, which occurred in a young lady aged twelve, the nail was obliged to be removed, but the matrix was left untouched; the ulcerations were healed, and the nail grew again, but there was no return of the disease, at least not in that finger. This had been a very severe case, and the matrix was so much disturbed that the nail, when reproduced, grew in longitudinal plicæ, or undulations, which, having an unsightly appearance, have since produced much chagrin.

Neither could the removal of the sides of the onythalamus be useful in all cases even of megonychia; for I remember an instance in which the morbid growth and incurvation took place lengthwise, the nail being much thickened as well as curved, assuming an appearance something between an horn and a claw. This monstrosity, which had for years gradually increased, and had twice been cut off, at length was allowed to grow into the flesh, halfway down the first phalanx of the thumb; and, when I was consulted, the parts were in such a state of disease that amputation (which accordingly was performed) promised the only chance of relief.

These cases may seem trifling, and scarce worthy of being placed on record; but, shall splendid volumes be published on the great operations of surgery, which can only by few and on few persons be performed, and shall a transitory notice be denied to lesser ills, which, by the frequency of their occurrence, make up the great sum of human misery?

From the London Medical Gazette.

ABSORPTION BY THE UTERUS.

To the Editor of the London Medical Gazette.

Sir,—Dr. Edward Rigby mentioned to me a few weeks ago, that his friend Professor Naegele had witnessed several instances of the absorption, by the vessels of the uterus, of the retained placenta; and he very obligingly promised to transmit to me, on his return to Heidelberg, a more exact statement of these cases. Yesterday I received a letter from Dr. Rigby, which contains a translation of part of Professor Naegele's letter to Dr. Von Froriep, at Weimar, detailing the particulars as Dr. N. observed them. A case of a similar nature was published a few years ago in one of the English medical journals, but at present I cannot recollect where it is to be found. It was probably supposed to be founded in mistake, for it does not appear to have excited much attention. If you agree in opinion with me that Professor Naegele's cases are sufficiently important to be presented to the public, I shall feel obliged if you will appropriate a few columns of the Medical Gazette to this purpose. I remain, Mr. Editor, your obedient serv't, Sam. Merriman.

Brook Street, Grosvenor Square,
Dec. 30, 1828.

Extract of a letter from Dr. F. C. Naegele, Professor of Midwifery at the University of Heidelberg, to Dr. L. F. Von Froriep, of Weimar, Editor of a periodical publication entitled Notizen aus dem Gebiethe der Natur- und Heilkunde. Communicated by Edw. Rigby, M.D.

During the year 1802 the following case occurred to my notice:—A lady of high rank, in consequence, probably, of a somewhat fatiguing journey, from which she had just returned, was brought to bed between the 24th and 26th week of her pregnancy; the child lived several hours after birth, little hæmor-

rhage followed, but the placenta did not come away. The cord, which was very thin, had been torn off at its insertion, as far as could be judged from the length of it. The midwife, who was an experienced as well as a highly respectable person, informed me that it had occurred as she passed her finger along the cord to ascertain whether the after-birth were already separated; and assured me that she had not exerted too much force in endeavouring to extract it, in which account the by-standers also agreed.

The lady and her friends were under considerable alarm on account of the placenta not coming away; and the midwife, who suffered not less anxiety for her patient, scarcely quitted the bed-side for the first nine days, and even passed the night in her room, so that the case was watched with the greatest attention.

The lochiæ, which were sparing and devoid of fœtor, and with scarcely any coagula of blood, lasted only fou. days; a slight attack of fever was experienced 24 hours after delivery, unattended, however, with any pain of the abdomen. The breasts did not swell, the menstruation returned in eleven weeks, and in about three years after she bore a child at the full period of pregnancy.

In another case, in 1811, where abortion had occurred between the 14th and 15th week, from no assignable cause, and with scarcely any hæmorrhage, and which I had an opportunity of observing with the greatest accuracy, the secundines did not come away; a febrile attack came on upon the third day, which soon disappeared; no local pain, no discharge from the parts of generation; the menses returned after nine weeks, and no traces of the placenta, &c. ever appeared.

An experienced accoucher of this place (Dr. Gotzenberger) has had the opportunity of attentively observing two cases of this kind, and assured me positively that he was perfectly convinced that no trace of the placenta had been detected either in a solid or in a partly dissolved state.

January 19, 1828, I was sent for to attend a patient, aged 24, the wife of a respectable farmer, living about 10 or 12 miles from this place. She had been brought to bed of her second child the day before, at eleven o'clock in the morning, and the after-birth had not yet come away. In the afternoon flooding had come on, which had been so considerable as to induce repeated fainting. Dr. Sigel, a physician of considerable experience, and M. Roth, an accoucheur, had been sent for from Ladenburg, and on examination had found retention of the placenta, in consequence of hour-glass contraction of the uterus, which had prevented the hand being introduced for the purpose of separating and bringing it away. Tinct. cinnamon. with a little laudanum, had been prescribed, and warm fomentations directed to be applied to the abdomen, to remove the spasmodic contraction. The flooding returned several times during the night and following day, and the discharge had begun to be very fœtid.

I did not see the patient till thirty hours after delivery; I then found her very pale, the pulse quick, small, and somewhat excited; the uterus pretty firmly contracted, with no marks of hour-glass contraction, but almost perfectly round; the discharge was extremely fœtid, and I could feel a portion of the placenta within the os uteri. From the circumstances of the case, I considered the after-birth as already separated, in which opinion the aforementioned medical gentlemen, and my friend Dr. Rigby (who had accompanied me,) agreed. Having deemed it necessary to remove it, I introduced my hand for this purpose, after experiencing considerable resistance from the contracted state of the uterus, and found the greater part of the placenta firmly attached to the uterus. This circumstance, combined with the obstinate and unruly behaviour of the patient, allowed me to separate and bring away scarcely two-thirds of the placenta; considerably more than one-third was left in the uterus, and the medical men present were convinced of the fact. The hæmorrhage did not return: injections of infus. fol. salv. off. were repeatedly thrown up during the night and following day, but brought away scarcely any coagula of blood. A smart attack of fever followed in about four-and-twenty hours after the operation, with violent headach, full and strong pulse, and considerable increase of temperature; the abdomen was not painful, even upon pressure; the breasts remained flaccid, although the child had been repeatedly applied by my order; and there were no signs of lochia. Almond emulsion, with nitrate of potass, and cooling drinks, were ordered; the bowels were evacuated by clysters, and an infusion of camomile flowers every now and then injected per vaginam. On the third day, however, the breasts began to swell, and a secretion of milk followed, but the child, which was weakly, refused the breast; the fever abated, and the milk again disappeared. She enjoyed perfectly good health till the 27th of January, when the left eye was attacked with inflammation, which, in spite of all attempts to check it, rose to such a degree of intensity, as in a few days to induce opacity of the lens and vitreous humour, with loss of sight in the organ. The menses returned in thirteen weeks after her delivery, in the usual quantity and duration: and at the present time, with the exception of blindness in one eye, she is in perfect health.

This case has been observed with the greatest attention, and the combination of circumstances that may be considered as having caused the ophthalmy, the obstruction to the secretion of milk, and suppression of the lochia, still further induced me to pay particular attention to the nature of the discharge.

As this circumstance interested me considerably, I have endeavoured of late years to excite the attention of several of my professional friends, and at various times have received accounts from them confirming the truth of my observations, both in cases of premature labour, where the placenta had

been retained, as also of labour at the full term of pregnancy, where large portions of it had remained attached, where no traces of it either in a solid or half dissolved form had come away, and this had occurred without any injurious consequences.

My friend Professor Sebastian, of this place, having lately returned from a journey to Holland, has communicated to me a most interesting case, which he received from the mouth of Dr. G. Salmon, of Leyden, where, after labour at the full period of pregnancy, the whole placenta had been absorbed, and the case terminated successfully. Dr. Salmon requested him to ask me if a case of this kind had ever come under my notice.

I am far from denying the liability to deception in cases of this sort, and am well aware how extremely difficult it is to form a correct opinion upon them. A comparison of this with processes of a similar nature, more especially with those that are observed to take place in cases of graviditas extra-uterina, and also in animals, and a more elaborate discussion of the subject in a practical point of view, which has engaged my attention for some time, has made me very anxious to avail myself of the experience of others, who may enjoy more extensive means for observation than myself. I have, therefore, taken the liberty of sending you this short and cursory communication, with the request that you will do me the favour of inserting it in your valuable journal.

From the London Medical and Physical Journal.

REMARKABLE CASE OF CORPUSCLES *freely moving both in the Vitreous Humour and in the posterior Chamber of the Eye, and causing the imaginary Perception of Objects.*

On the 17th August, M. Galy, surgeon of the Hospital of Périgneux, consulted M. Parfait-Landrau on the case of M. Audebert, formerly a magistrate, then in his seventieth year, and of a bilio-sanguineous temperament: he was subject to wandering pains, resembling those of rheumatism, and had for several years experienced an alteration in regard to the sight of his right eye, of which he feared the consequences, although the affection had remained a long while stationary. He sees muscæ volitantes, black points, and other images, of various shapes, &c., which have been so well described by M. Demours, in a memoir which he recently read to the Academy.

After an attentive examination of the patient's pupils, which were rather contracted, M. Parfait-Landrau thought that he could perceive certain corpuscles moving apparently at the bottom of the posterior chamber of the right eye, and shining with a sort of phosphoric brilliancy. As these phenomena were new, and of a most interesting description, he did not hastily admit the evidence of his senses, but doubted the correctness of first thoughts; and, on the supposition that what appeared to be in the eye might be really nothing more than the reflection of external objects, (although they were not apparent in the sound eye,) he proposed to the patient and his medical attendant that the pupil should be dilated by the extract of belladonna. The pupil was by this means thoroughly dilated, and MM. Parfait-Landrau and Galy distinctly perceived a considerable number of corpuscles, which in general resembled finely powdered liquorice, and a few had the brilliancy of fine gold dust. These particles moved to and fro throughout the whole extent of the posterior chamber; when the eye became fixed, they descended; when it moved, they were again agitated as before; and thus on in succession.

M. Parfait-Landrau is firmly of opinion that these substances were in the vitreous humour, as they were numerous and sufficiently near to be distinctly seen with the naked eye, although he employed a magnifying glass in his examination of them.

This new discovery of an evident and physical cause for that which the ancients called *perpetual imagination*, which the moderns have since attributed to the state of the internal membranes of the eye, to varicose veins in its humours or membranes, is the more remarkable, as no similar phenomenon is described in any work professing to treat of these matters. M. Demours thinks that one of the causes of these muscæ volitantes is due to the humour of Morgagni, in which he supposes there are small portions which, without losing their transparency, become more dense, ponderous, and refractive. Other practitioners, equally respectable, consider them to be produced by the aqueous humour; and our author allows that they cannot, in every case, result from the phenomenon which is the subject of the present paper. He therefore does not attempt to refute the various opinions to which they have given rise. He agrees with M. Demours in stating that these corpuscula volitantia rise with the movement of the eye, but immediately afterwards fall to its most dependent part, whatever may be the precise position of the eye itself. This curious fact may be readily explained in the present patient, but certainly it is not quite so intelligible in those cases where it is attributed to the development of varicose veins in the humours or internal membranes of the eye. It is alike inexplicable on the supposition that it is the effect of partial paralysis of the retina.

In order that these corpuscles might move about in the vitreous humour, the hyaloid membrane which forms its cells must be first destroyed; the natural consequence of which is a considerable reduction in the density of that humour; and it is well known that this alteration may exist without preventing the other parts of the eye from performing their respective functions. For there is scarcely an oculist in the habit of operating for cata-

ract by extraction of the lens, who has not found in some patients the vitreous almost as fluid as the aqueous humour, without preventing the success of such operations. And thus we see that the crystalline humour may, without evident cause, entirely dissolve within its membranous sac, and occasion no alteration in other parts of the eye.

That, in the case of M. Audebert, these corpuscles which appear to move in the vitreous humour, are not contained in its cells, and do not owe their movement to the undulation of this humour, (if it should be deemed capable of undulation,) is proved by the fact that, when the eye moves, they are seen very distinctly rising from the bottom, and traversing the whole posterior chamber. Again, as soon as the eye is stationary, they are seen descending to their former situation; upon which the eye becomes clear, and the patient no longer perceives the muscæ volitantes.

This is certainly a singular phenomenon; but it might, perhaps, have been occasionally observed if the pupils had been always artificially dilated in the examination of similar cases.

M. Audebert reads with the affected eye, and feels no pain in it: the pupil duly contracts and dilates, and all the parts of his eye, the vitreous humour excepted, present no morbid appearances.

Four days after the first investigation, the eye was again examined in the presence of MM. Galey and Renaud, surgeons, and of Dr. Vidal, member of the medical jury of the department, and head physician to the hospital; all of whom testify to the truth of the above statement.

From the London Medical and Physical Journal.

INQUIRIES RESPECTING THE EFFICACY OF THE OIL OF TURPENTINE IN THE TREATMENT OF NEURALGIA, AND PARTICULARLY OF SCIATICA. By M. Martinet.

Turpentine was employed many ages ago in the treatment of diseases of the nerves. It was used by Galen and Michael Doringius in the form of a plaster; Scultet exhibited it successfully in wounds of the nerves; and Bonnet had even the good fortune to cure a patient of neuralgia by the essential oil of turpentine: but Archibald first brought it into notice as a remedy for sciatica. Having informed Cheyne of the success with which he had employed it in this disease, the latter recommended it to Home, who afterwards published, in his "Experiments and Facts," seven cases in confirmation of the practice. Since that period turpentine has been employed in the above mentioned diseases by many physicians of different countries; by Helst, Thilenius, and Lentin, in Germany; and by Recamier, De Larroque, Dufour, and Husson, in France.

M. Martinet affirms that little benefit is to be expected from the employment of the oil of turpentine, without due attention to the mode of administering it. It has been exhibited in various proportions, and in very different ways, but he decidedly prefers giving it internally, and in small doses of twenty drops three times daily, in order that its absorption may be the more gradually but thoroughly effected. In larger doses it is liable to occasion diarrhœa, by which its peculiar properties are rendered unavailing. The oil of turpentine, when thus given in scruple doses, and in some proper vehicle, such as honey, syrup, or (what is still better) in magnesia, by which its acrid taste is more completely disguised, produces a strong sensation of heat in the stomach and whole intestinal tube, as well as in the diseased nerve and limb; and sometimes it even occasions a general sweat. In certain individuals it causes a slight colic or a mild diarrhœa, and, more rarely, either a dysury or an increased flow of urine. But when a drachm of the medicine is taken instead of a scruple, intense colic, diarrhœa, and even vomiting, supervene; yet these formidable signs of irritation, both of the digestive and the urinary organs, generally disappear as soon as the medicine is intermitted. In patients whose stomach and bowels are irritable, a small quantity of opium is found a useful addition to the turpentine, by moderating its stimulating effects on the mucous membrane of those parts.

When the oil of turpentine is administered in the manner and quantity just described, it would seem to be particularly powerful in the removal of sciatica; yet, as M. Martinet suggests, this opinion may have arisen from the greater frequency of this complaint. Be this as it may, its efficacy is also remarkable for curing other species of neuralgia which affect the extremities.

When we attempt to deduce from the phenomena which follow the exhibition of the oil, the mode of its operation, and the cause of its being efficacious, we cannot refer the latter either to its purgative, its diuretic, or its sudorific effects; since this augmentation of the different secretions is neither regular nor constant in its occurrence, and never bears any proportion to the benefit derived by the patient. Besides, we daily see patients who are purged, sweated, &c. much more abundantly by other medicines, without deriving the least benefit: and it was this reflection which led Home to attribute to the oil of turpentine a specific influence over sciatica.

Some physicians have supposed that this medicine produces its sanitary effects on the nervous system by causing a revulsion from the brain to the stomach and skin; but M. Martinet thinks he has clearly shown in his Essay that these effects are almost always missing, even in cases of recovery: and he, therefore, will not admit this explanation to be correct. Others, on the contrary, attribute its efficacy to a revulsion on the nerves, which is sympathetic with that of the stomach.

M. Martinet, however, conceives that the stimulation which this oil communicates to the mucous membrane of the stomach is equally produced in the nerves affected, and to a greater or lesser degree, in proportion as they are more or less morbidly affected; which, in his opinion, serves to explain the fact that this medicine is more efficacious in severe and obstinate, than in mild and recent cases of neuralgia. The new modification which is thus effected in the state of the nerve would seem, therefore, to dispose it to resume its natural action, that of health. The heat which the greater proportion of those persons who are either cured or relieved feel in the affected parts, seems to confirm the explanation adopted.

As to the question whether the turpentine acts directly on the nerves by absorption, or exerts its influence over them indirectly and sympathetically, through the medium of the stomach, we are most inclined to adopt the first of these hypotheses: and we found our opinion on the fact that this oil is nearly always observed to fail in curing those cases of neuralgia where it produces violent purging; which is also true in respect to all other substances employed in this disease, and whose only effect is to irritate the mucous membrane of the stomach and intestines. Its action on the urinary organs would appear to be seldom useful, but, on the contrary, often injurious.

As an external remedy, turpentine seems most beneficial when rubbed in by the hand: it thus produces redness of the surface, without exciting a sensation of heat along the course of the nerve. But the strong and penetrating odour of the oil, when exhibited in this manner, not unfrequently occasions headach.

This medicine is of approved efficacy in all cases of neuralgia affecting the extremities, and particularly in sciatica, when this disease is simple in its character, and evinces no sign that the nerve is either altered in its structure, in a state of inflammation, or compressed by the formation of a contiguous tumour. M. Martinet affirms that, whether the complaint be recent or otherwise, the chance of cure by this remedy is greatest, *cæteris paribus*, when the pain is so intense as to indicate distinctly the course of the nerve, and so obstinate in its nature as to yield to no other treatment whatever. But it is necessary to pay attention to the state of the stomach; for, in case it should not be perfectly sound, the medicine must be immediately intermitted.

Twelve days usually suffice for curing neuralgia when it affects the extremities, and, more commonly, only half that time; and the exhibition of this remedy during a longer period would therefore be injudicious, and detrimental to the organs of digestion.

That the reader may be enabled to judge for himself respecting the correctness of the doctrines above advanced, we shall terminate the present paper by giving a brief analysis of the various observations which M. Martinet has included in his essay.

Of seventy individuals affected chiefly with sciatica, and other kinds of neuralgia of the extremities, fifty-eight were cured: viz. three by rubbing in the oil, and all the others by taking it internally; ten, two of whom prematurely intermitted the medicine, obtained only temporary relief from its use; and five received no benefit. Of these five, two had diseases of the joints, of which they died a few months afterwards.

Of these seventy-one cases of neuralgia, (for one of the patients had two affections of the kind,) forty were acute, and thirty-one chronic. Of the forty acute cases, thirty-four were cured, five relieved, and only one continued in the same state. Of the thirty-one chronic cases twenty-four were cured, three relieved, and four received no amendment.

Again, of the seventy-one cases of neuralgia, thirty-three had resisted the effects of divers remedies; and, of these thirty-three, twenty-five were completely cured, four were only relieved, and four more remained uninfluenced by the medicine.

Of the fifty-eight cases of neuralgia which were cured by the oil of turpentine, thirty-four were cured in less than ten days; twenty-two in less than twelve days; and three within the space of from twenty-eight to forty-five days.

Of the same fifty-eight cases which were cured, forty-eight were cases of sciatica, two of which were cured by frictions; three were cases of crural, four of brachial, and three of facial neuralgia.

Of the ten patients which were only relieved, two were affected with sciatica, and their treatment was intermitted on the second day.

Finally, of the five in which the treatment entirely failed, there were four cases of sciatica, and one of crural neuralgia. Two of the four died of disease of the hip-joint.

In twenty-one instances it is recorded that a sensation of heat was experienced along the course of the nerve, and in the affected limb; and of these, nineteen were perfectly cured; the other two, having intermitted the treatment, were only relieved.

In eighteen cases a sensation of heat was felt in the intestines, and especially in the stomach. Three were seized with vomiting, in two of whom it was occasioned by a too powerful dose of the oil, namely, two drachms.

Three suffered from diarrhœa and severe colics; and in one instance the inside of the patient's mouth was affected with vesicles.

In five cases the urine was more abundant than natural; and four were attacked with strangury. Two of these had taken too large a dose.

In ten patients there was sweating over the whole body, and in two instances it was confined to the member affected.

And, lastly, one woman, affected with neuralgia, was, as it were, intoxicated by the turpentine; and two other patients experienced the sensation of itching throughout the whole body.

From the Medico-Chirurgical Review.

THE MORBID ANATOMY OF THE BOWELS, LIVER, AND STOMACH,

Illustrated by a series of Plates, from Drawings after Nature, with explanatory Letter-press, and a Summary of the Symptoms of the Acute and Chronic Affections of the above named Organs. By JOHN ARMSTRONG, M.D., &c.

[Fasciculus the Second.]

In our last number, we gave a full account of the first Fasciculus of Dr. Armstrong's splendid work. We now proceed to an analysis of the second, the plates of which are numerous and beautiful—indeed, too beautiful, the common and universal fault of all pathological representations.

The talented author observes, in the opening of the present Fasciculus, that Morbid Anatomy shows four prolific causes of disease (they are the diseases themselves)—inflammation, tubercle, fungus, and scirrhus. The effects of inflammation have been portrayed in our first article, to which we may refer.

"With respect to tubercle, it hardly ever attacks the stomach, except it be now and then seen in the serous membrane, where the peritoneum has been studded, by that deposition, in points. But fungus and scirrhus are not uncommon in this country, sometimes seated about the œsophagus, aud sometimes about the stomach, and not unfrequently, either the one or the other is found in both these parts in the same case. Simple inflammation, however, by which is meant inflammation uncombined with any of the above mentioned peculiar formations, sometimes attacks the œsophagus, and may lead, like fungus and scirrhus, to stricture there; though it must be confessed, that such an occurrence far more often depends on those adventitious structures, than upon the thickening which results from simple inflammation, and which is displayed in one of the drawings made from a recently fatal case. The very few cases of stricture of the œsophagus which I have seen to depend upon inflammation alone were not seated about the cardia, but higher up in that canal; whereas in those which have fallen under my observation as the effects of fungus or scirrhus, the stricture was mostly in the vicinity of the cardia. In three or four cases, I have known less or more obstruction to arise about the pylorus, from the thickening of its cellular membrane through simple inflammation; but what is usually called stricture of the pylorus depends upon the presence of fungus or scirrhus, and my own dissections would authorize me to conclude, that fungus of the cardia, stomach, and pylorus, occurs quite as frequently as scirrhus in those situations—a fact which has not, perhaps, been sufficiently attended to by authors who have expressly written on morbid anatomy.

"Both fungus and scirrhus seemingly attack almost every variety of structure, yet, from the attachment and derangement which each effects in the surrounding parts, during their growth and destruction, it is often difficult, and even impossible to fix upon the precise texture in which the disease had commenced. But indisputably the cellular connecting membrane of organs is the most common seat of both these extraneous productions, especially with reference to the œsophagus and stomach; though some minute examinations would induce me to infer, contrary to the opinion of some of my friends, that the true fungus encephaloides occasionally springs from a mucous surface, not only of these, but of other organs.

"The great alteration of structure, then, and consequently of office, in the œsophagus and stomach results from inflammation, fungus, or scirrhus, and this remark is singularly applicable to what is called stricture, which sometimes, however, has a truly spasmodic character in the œsophagus, as shall be shown in the detail of the symptoms connected with those morbid appearances, which the plates of this Fasciculus are intended to elucidate." 50.

STRICTURE OF THE ŒSOPHAGUS FROM SIMPLE INFLAMMATION.

This form of stricture is rare. It may take place either under the pharynx or near the cardia, and is preceded by signs of irritation of the mucous membrane of the stomach, such as flatulence, acidity, epigastric uneasiness, redness of the point and margin of the tongue, prominence of the papillæ.

"In instances of this sort, more or less redness is discoverable about the fauces and pharynx; for, though the irritation commonly begins in the inner lining of the stomach, it is a striking fact, that mucous membranes are apt to suffer secondarily toward their extremities. Hence the frequency of sympathetic inflammation about the fauces and the pharynx of those whose stomach is out of order from mucous irritation; and this view of the subject is so important, that little impression can be made in chronic inflammation of those parts, unless the original remote disorder be constantly regarded in the plan of treatment. If the inflammation arise under the pharynx, some degree of pain and impediment in swallowing exist there, with an increased secretion from the throat; and the increase or diminution of these symptoms mark the advancement or subsidence of the inflammation, together with the declension or improvement of the general health. It must be borne in mind, that chronic inflammation about the epiglottis, rima glottidis, and pharynx, gives rise to great uneasiness in the act of deglutition; but such cases will be discriminated, first, by the hoarseness, peculiar cough, and the other signs which mark a laryngeal affection; and, secondly, by the sense of suffocation produced by every attempt to swallow any thing irritating the epiglottis, which then frequently performs its office imperfectly. During the progress of stricture of the œsophagus from inflammation, it is accompanied by a sense of

heat and uneasiness in the posterior part of the mouth, and also by difficulty of swallowing, a copious secretion of saliva, slight cough, and ultimately some degree of dyspnœa. If ulceration take place, almost all the symptoms are aggravated, and in the attacks of nausea or retching, a tenacious mucus is ejected, sometimes mixed with pus or blood. Ulceration of the œsophagus occasionally proves fatal by excessive hemorrhage, and I have known the same event happen from ulceration of the stomach. But if the patient should not be thus suddenly carried off, great emaciation takes place, with fever of a hectic type, and a little before death, there is often feebleness, and even aberration of mind, as is seen in most instances where patients die from inanition." 62.

Spasmodic stricture of the œsophagus reveals its true character by the suddenness of its accession and retrocession. It is most common in nervous individuals, and hysterical females. In some dissections, Dr. Armstrong has found the cardia reddened, thickened, and softened, apparently from chronic inflammation, and on tracing the history, it appeared that the patients had had a sense of uneasiness and obstruction in that quarter during the passage of solids or fluids. This sense of obstruction, however, is very common where no organic change can be going on in the part, especially among females of nervous temperament.

STRICTURE OF THE CARDIA FROM FUNGUS OR SCIRRHUS.

These two diseases cannot be distinguished by symptoms during life. It may be borne in mind, however, that scirrhus most frequently occurs after the age of 40 years—and that fungus may attack at any period of life. The progress of fungus may be expected to be more rapid than that of scirrhus--but no certain diagnosis can be made, unless some of the encephaloid matter should be ejected during the softening and destruction of the tumour --which is not a very common occurrence, the patient often dying before the morbid growth has arrived at this stage.

"The symptoms which most unequivocally indicate fungus or scirrhus about the cardia are, uneasiness there, impediment and pain in the deglutition of food, as if it rested or stuck at that point, and a ropy secretion from the fauces, with occasional nausea, and retching. Regurgitation of solids or liquids is not unfrequent during or after meals. In the course of either complaint, the surface becomes of a sallow, sickly hue, and has a withered aspect and feel; while the flesh wastes in proportion to the progress of the disease, the skin at last becoming dry, loose, and wrinkled, through the absorption of fat from the subjacent cellular membrane. It may be here remarked, that less emaciation generally attends fungus than scirrhus, supposing each exist separately and independently of the other. This circumstance may proceed partly, perhaps, from the more rapid progress of fungus; and when this state supervenes or attends scirrhus, the case usually terminates more speedily than when scirrhus occurs alone.

"The matter ejected from the œsophagus in the first stage of scirrhus very often closely resembles a mixture of arrow root in hot water, and even, when softening takes place, it frequently has a similar appearance; but where ulceration advances, it is apt, occasionally, to be blended with a bloody or ichorous discharge, or with coagulated blood itself, while lancinating pains succeed, great distress, fever, colliquative sweats, and much emaciation." 63.

STRICTURE ABOUT THE PYLORUS FROM THE ABOVE DISEASES.

The symptoms of this dangerous malady are extremely obscure for some time, especially when the disease is scirrhus, for then they form more insidiously, and advance more slowly, than when fungus is seated in that part of the stomach.

"One of the first signs is a feeling of uneasiness in the direction of the pylorus, which is the most apt to be felt after bodily fatigue, during anxiety, or after an unusually full or indigestible meal. The common train of dispeptic suffering follows, namely, flatulence, irritation, sense of fullness or weight in the epigastric region, with depression of spirits or fretfulness of temper, and the complexion gradually acquires the cast of sickliness, and the patient loses flesh as well as colour. At length, on any extraordinary exertion, either of body or mind, nausea, retching, or vomiting unexpectedly takes place, and the quantity of fluid matter ejected frequently exceeds that which had been taken; but this irritability of the stomach is most liable to be displayed when, the mind being over-wrought, or the body fatigued, some solid or liquid material shall offend the stomach. At a further stage, the patient feels what he calls a forcing pain, or pain and pressure in the region of the pylorus, as if the contents of the stomach met with a resistance at that point, when the organ acted to propel them into the intestines. This symptom generally occurs an hour or two after a meal, and is one of the most certain indications of stricture of the pylorus, increasing as the disease advances, together with the irritability of the stomach, and the loss of flesh and strength. In my own practice, I have only met with one exception to this remark, and in that case the patient never complained of urgent pain, never vomited in the course of the disease, but then he instinctively took extremely small quantities of food at once, and that of the blandest description. Solid animal food commonly excites the most uneasiness, and is often followed by eructations of an offensive taste, rolling of wind as if confined in the stomach, with a sense of rising or choaking in the throat. On some occasions I have known macerated shreds of mutton or beef brought up several days after a meal of one or the other. Lassitude and languor increase in such examples, and

the heart generally becoming much attenuated, the pulse is very feeble, and sometimes the patient is liable to feelings of faintness, more especially on exertion of the body. In scirrhus, the matter which comes from the stomach is generally like arrow root mixed with hot water, or ropy like an infusion of lint seed, whereas in fungus it commonly has a more curdly character—an appearance which may sometimes assist in the discrimination of the one state from the other; but in both the ejection of a glairy or grumous liquid may considerably exceed the quantity of fluid which had been drunk. Sometimes however, fungus, but particularly scirrhus, may exist, about the pylorus or central portions of the stomach for two or three months before vomiting takes place—a fact which should be remembered in the investigation of the seat of such affections." 64.

Dr. A. observes that, in all cases of strictured pylorus he found great emaciation, but that the case of Bonaparte was an exception. We believe Napoleon's stomach was generally affected with scirrhus, but that there was no particular stricture of the pylorus. Amongst the causes of this dreadful disease, Dr. A. properly ranks mental anxiety.

"Most of the ancient philosophers lived to an extreme old age, their pursuits being so benevolent and their thoughts so innocent as necessarily to lead to mental serenity; but Napoleon was not a philosopher, and though he attempted to govern the whole civilized world, had so little command over himself, that he allowed his mind to be incessantly disturbed even by little things, especially towards the close of his career, and thus, probably, at last converted an hereditary tendency into a destructive disease." 65.

FUNGUS OR SCIRRHUS OF THE STOMACH BETWEEN THE CARDIA AND PYLORUS.

It has been remarked, that when the stomach is universally affected with organic disease, there is often less functional derangement than when a small portion only is affected. Dr. A. is inclined to agree in this remark. This, indeed, was the case with Napoleon. The real disease was not suspected before death—as the liver was the organ supposed to be diseased.

"When fungus or scirrhus attacks the central parts of the stomach, the most pathognomonic symptom is pain after any thing has been eaten or drunk, the history of the case not corresponding to that of simple inflammation of the mucous texture, in other respects. For instance, the tongue is not so preternaturally red in general, but surprisingly natural for the most part, considering the permanency of the character, and the progressively deep impressions of the disease. The appetite too, is, in general, not prostrate as in chronic muco-gastritis, for, on the contrary, the patient usually longs for this or that kind of food, but his taste is so capricious, that if the practitioner regulated it to-day, the restriction is sure to be violated to-morrow, or shortly afterwards. The pulse is not above par in power or in frequency, as in chronic muco-gastritis, for a considerable period from the accession of the complaint: indeed, in the majority of examples it only becomes so on the solution or breaking up of fungus or scirrhus, when it frequently happens, that the circulation is disturbed by a sort of febrile commotion. From first to last there is a wasting of the flesh, and a loss of colour, with occasional attacks of nausea, retching, or vomiting, particularly on exercise, over-exertion, or indulgence of appetite; and now and then a tenacious fluid is thrown from the stomach, which, in the last stage of softening, is usually mixed with a dark, acrid, or offensive matter, as before described. An examination of the epigastrium, by the fingers, may sometimes detect hardness and swelling, so as to lead to the presumption, that organic disease exists in the stomach; but such irregularities, even when present, are not always tangible through the integuments, and therefore we should rather rely, conjointly, upon the past history, and the present concourse of uneasy feelings, and interrupted functions, with reference to the stomach. Upon the whole, I should say, from my own experience, that more pain generally attends scirrhus than fungus of this part, particularly towards the conclusion, and at that time a sensation of frequent faintness is not uncommon, with a tumultuous feeling or oppression about the heart, as often happens in affections of the pylorus. In almost all great organic derangements of this nature seated in the stomach, a distinct and even strong pulsation is felt in the epigastrium, a symptom which, perhaps, may arise from the pressure of the morbid mass upon the cœliac artery or abdominal aorta; but whatever may be the explanation of this sign, it will be found one of the most constant in the progress or towards the conclusion of scirrhus or fungus of the stomach, and wherever it exists, in conjunction with a sallow surface, irritability, or other uneasiness of the stomach, and loss of flesh, fungus or scirrhus of that organ may be fairly suspected." 66.

The difficulty of recognising the existence of these diseases is sometimes sufficiently obvious—but the distinction of scirrhus from malignant fungus we believe to be little more than guess-work. Fortunately it is not of very vital consequence, as to treatment. With the following extract, the work, and our analysis of it, conclude.

"There is something forcibly striking in the expression of the countenance and colour of the skin in most great organic diseases. Thus, in tubercular disease of the lungs and elsewhere, the lucid cornea becomes more glary and the conjunctiva more blanched and pearly than natural, with a softness and almost pensiveness of expression; while the face grows more and more sharp, and the surface acquires a much more delicate hue, as is exemplified in the hands, which are then remarkably white, the prominent veins wandering across them, like fine blue lines through

pure marble. Again, the expression in scirrhus considerably advanced, is that of more or less solicitude, and the skin commonly has a sallow tint, like that of the pale yellowish willow; whereas, the cast of the countenance is less materially affected in fungus, and the skin has neither the delicacy attendant on tubercle, nor the sallowness attendant on scirrhus, but is often of a dull muddled white, almost resembling that of common tallow or painters' putty. It is indeed difficult, nay impossible, to convey in words very precise descriptions of the varieties of expression and colour; but there is, nevertheless, some change about the face and skin which often at first sight, leads an experienced eye to suspect the presence of deep visceral derangement. Yet every prudent man will not be guided by first impressions, but pause and accurately investigate all the particulars of the case, and then deliberately reflect upon them, in order to legitimately deduce a correct opinion. The intelligent pathologist will be especially on his guard not to confound the ventricular disturbance and sallowish aspect of the sedentary and studious dyspeptic with any organic disease of the stomach; for, though in such persons the face be 'sicklied o'er with the pale cast of thought,' yet it is most frequently an indication merely of a disorder, which admits of a ready remedy, and which, even if continued under the same character, may not at all shorten life." 68.

The plates in this fasciculus are five in number, beautifully executed, and highly expressive of the scirrhous, fungoid, and ulcerative diseases, that affect the œsophagus, cardia, gastric parietes, and pylorus. Doubtless the colouring is, in most of the plates, much too high; but, as we have often said before, this imperfection appears to be inseparable from pathological drawings. The uncoloured plates are, in fact, much more faithful than those which are embellished by the pencil; so that it may be truly said of them, that when unadorned, they are adorned the most. It does not appear that the treatment of these dreadful diseases came within the scope of the work, as nothing is said of it in the second fasciculus. But what, in truth, can be said on such a hopeless subject? It is of great consequence, however, to be able to say whether there is, or is not, organic disease in any given case. The dangerous process of POLYPHARMACY may thus be deprived of its horrors, and the remedial art be prevented from becoming the instrument of destruction. We hope Dr. Armstrong will persevere in portraying the organic maladies to which flesh is heir, in a style which does infinite honour to the pencil of Mr. Cox, and the lithographic press of Mr. Fairland.

From the Medico-Chirurgical Review.

AN ESSAY ON THE REMITTENT AND INTERMITTENT DISEASES, INCLUDING, GENERICALLY, MARSH FEVER AND NEURALGIA, &c. By JOHN MACCULLOCH, M.D. Two Vols. 8vo.

ART. III.—NEURALGIA, TIC DOULOUREUX.

We have now arrived at the second, or rather the third, volume, of Dr. Maculloch's work, (for the volume on Malaria may be considered as the first) and the important subject of NEURALGIA presents itself, occupying the whole of the volume. This distressing malady, or class of maladies, divides itself into so many forms, and assumes so many questionable shapes, that it will require two or more extensive articles to trace it through its ramifications. Nor do we think the pen of author or reviewer can be more profitably employed than on such a task.

It is now a considerable number of years since Dr. M. treated neuralgia as a mode or variety of intermittent—a doctrine not generally, if at all, adopted by the profession at large.

"In the disorders which I am about to enumerate, some have been considered as independent diseases, arising from very different causes, while, of these, there are a few which have even established an independent character almost as ancient as physic itself.

"Others have been viewed as symptoms of some disorder, but not of this one; while others again have been considered as trivial, or else inexplicable; mysterious cases occurring once in an age, and out of the common rules of physic: while, still further, a few have been viewed as the produce of external injury; mechanical solutions of continuity or derangements of structure. Under such a confusion of names and opinions, I had no resource but to form an entire new arrangement, by creating apparently new diseases and forming new terms, or else to abolish old and received diseases with their names, treating them as varieties, or lastly, at least presuming to treat as Neuralgiæ, under their old names, those varieties which were already named, and to suffer the others to remain as nameless as they have hitherto been. And this plan, as the least offensive, I have adopted." 5.

I. NEURALGIA OF THE FACE—TIC DOULOUREUX.

Heberden and Fothergill appear to have been the first to allude to the disease in this country, though the term tic douloureux originated with André, a French surgeon, who also proposed the division of the nerve, in 1756. The public then considered it a new disease—and still think it a rare one:—"But it is neither new nor rare." The term alone is new. The apparent rarity is thus accounted for by our author.

"To be noticed as a case of this disease, the pain must be excessive, and must also be limited to a peculiar part of the face; and further, it must be found in the opulent, or in those who, little accustomed or willing to bear pain, fly to physic for relief, and thus call attention to themselves and their cases. There are thousands who suffer from it, under forms less marked; and thousands, in the

middling and lower classes, who endure it, even in its worst form, but of whom the public never hears. He who will thus seek it out, will soon be convinced of the truth of this assertion, as I have long since been: and though he may find a much greater number of the cases not decidedly marked by the strongest and most peculiar features of this disorder, and therefore not known by this new popular term, he will be singularly unfortunate if he does not also meet many, of the best defined and most intense character, generally endured as best they may, and seldom forming objects of attention to the great mass of practitioners." 8.

We are quite convinced of the truth of the above representation. In a single, and not very extensive tract, in this country, Dr. M. has been able to collect not less than a hundred cases among the labouring classes. The names under which the disease formerly went, before the term neuralgia came forth, were probably rheumatism of the face—affection of the antrum—clavus hystericus—toothach—periodical headach—wandering gout, &c. The term neuralgia is certainly more scientific than tic douloureux, and more useful, inasmuch as it points out a road to a generalization, which has certainly been slowly taken advantage of by physicians. In this place, Dr. M. passes a just censure on that system of sparring which has lately been kept up between the medical and surgical branches of the profession, as if there was any real division in nature between the two. But the physician is taught to abhor the knife—while the surgeon despises the Pharmacopœia. Dr. M. accuses surgery of keeping back a knowledge of neuralgia, by the attempt to insulate the disease from its proper connexion with the general health—in other words, to cure it by the scalpel. The division of the nerve, however, is now so universally given up, that we need not waste time on its condemnation. That the pain of neuralgia is not confined to any particular nerve, or class of nerves, admits now of no doubt—not even excepting the ganglionic nerves.

"I need scarcely say, that, in this disorder as it stands in the popular acceptation, the pain is most severe; being probably as great, often, as the nervous system can endure: since all the surrounding objects sometimes disappear before its violence, or it deprives the patient of all other sensations; in vulgar language, of all his senses; frequently also inducing absolute delirium, as I just noticed; an effect rarely occurring from any other pure pain than the inflammation in the bowels. This extremity of pain is commonly instantaneous in its attack; resembling very much, in this respect, the electrical shock; and most generally it is similarly transitory, coming on in repeated fits during the continuance of the entire paroxysm. It is not, at the same time, always the sole pain; since a general painful state exists through the whole paroxysm; sufficiently severe, should it be the only one, as it often is, but appearing almost pleasure, when contrasted with the more acute shocks of the nerve." 16.

During this state, the integuments, or rather the whole surrounding parts, become extremely irritable, or tender to the touch—generally more so from light than from firm pressure. It is not unusual to find a vascular turgescence accompanying the pain, which might, *à priori*, be expected, on the principle, "ubi stimulus ibi fluxus." This turgescence, indeed, sometimes amounts to a species of inflammation, resembling that of rheumatism—an analogy that it may be useful to bear in mind. As the pain ceases, the general soreness rather increases, and often remains for a good while, leaving the patient in comparative health, or, more frequently, in a state of debility.

"Such is a simple and ordinary case of a paroxysm of this neuralgia; but many accessory circumstances of an equally obvious nature sometimes attend it. Thus, the neighbouring muscles, and even the more distant ones of the limbs, are often affected with spasms, occasionally to a considerable extent; while, not unfrequently, with the usual charity of the healthy, they are attributed to impatience and debility of mind on the part of the patient; as is more especially and certainly the case when these spasms seize on the larynx, producing involuntary cries, or converting the ordinary breathing into audible sounds. In truth, no one is entitled to assume the office of critic on a neuralgic patient, who has not been a patient himself; and, for the cause of charity, it were perhaps to be wished that the disorder were more common, or that a short apprenticeship at least to it, were a more general lot.

"Frequently also, there is an increased flow of saliva, and, much more often, of tears, which, in some cases, almost stream from the eyes; scarcely noticed by the patient, but not so by the by-standers, always ready to attribute to mental weakness, what, in this case, is a mere increase of secretion from disordered excitement of the glandular nerves, forming, in fact, a peculiar variety or modification of neuralgia which I shall have occasion hereafter to point out more distinctly. And if it is an episodical remark, I know not where better I can introduce it than here; that in patients who have suffered severely from neuralgia under any of its forms, if the lachrymal glands have once been materially affected by the disease, they rarely recover their healthy state: and thus, that tears continue to be, not only easily excited in those who scarcely knew, before that, what it was to shed one, but that they frequently occur, and even in streams, without any mental cause at all, and not uncommonly in sleep, though no dreams are present, or at the hour of awaking; often lasting a considerable time, and producing no small inconvenience." 18.

Lastly, there is often a sympathetic affection of other and distant nerves, where anatomy can trace little connexion, except through the medium of that common centre, the brain.

The ingenious author now goes beyond the surface of things, and examines into certain less obvious characters of the complaint, which help to shed light on the real nature of the malady.

"Immediately before the attack, if the pulse is examined, it will be found to put on that character which it possesses in the cold stage of an intermittent; while, through the progress of the paroxysm, it passes through the other analogous changes. If also a watchful patient, at least when directed to do so by his physician, (which I fear has rarely been the case,) attends to his previous feelings, he will find that there are most commonly some indications of a cold stage, generally obscure, it is true, as is the case in most of the anomalous and chronic intermittents, but still discernible: while doubtless it may sometimes be wanting or difficult to make out, as is so often the case in such obscure intermittents. When most distinct, it is like the sensation of cold water applied to some part of the face, or trickling over it, being indeed often thus described by patients; or there may sometimes be a sensation of cold, more general, if also transitory. The skin, at least of the face, also becomes pale and shrunk, with that peculiar physiognomy attending ague, so indicative of all these diseases, if so perpetually overlooked: and this is a symptom which, if unnoticed by the patient, ought never to escape the eye of an observing physician, explanatory, and often useful as it is. Occasionally, this paleness is local instead of general; and I have seen cases where I could pronounce that the paroxysm was threatening, from one side of the face turning suddenly white while the other retained its natural aspect and colour.

"If this is the cold stage of this particular intermittent disease, the fit of pain appears to belong to the hot one, or thus at least has it always seemed in my experience: and if, as a hot stage, it is not a very marked febrile state, it is sometimes sufficiently apparent, in an increase of heat, local if not general, in the change of the pulse, and in a thirst which occasionally accompanies it. And if it is a slightly-marked hot fit, it is not slighter than that which often occurs in chronic intermittent when other kinds of local symptoms are present, or even when the cases are pure; while in such cases, as well as in this and other neuralgiæ, the sweating stage is rarely well marked, or is perhaps only discovered by the facility with which that effect is produced by exertion." 21.

Thus Dr. M. has described a paroxysm of neuralgia as resembling that of an obscure or chronic intermittent, with the superaddition of its peculiar pain, or local affection of a nerve. It yet remains to examine what resemblance the general course of the disease bears to the common or simple intermittent.

There are two forms of this, as of other neuralgiæ—the acute and chronic—new or habitual. The chronic and habitual is, like all intermittents, far less regular than the former. In the recent state, the pain returns in distinct and defined paroxysms, leaving an interval of health. These returns are generally quotidian, rarely tertian or quartan. But when the disease is of long standing, the regularity is much less distinguishable than even in common or anomalous ague—"with the single exception of the affection of the heart." This irregularity, however, may be more apparent than real. How seldom are complaints accurately watched, and faithfully recorded. Sauvages relates a case where the pain recurred every eighth day, and lasted 30 hours. It was in the temporal muscle, and was denominated by Salius the *hemicrania lunatica;* the entire duration of the disease being three years and a half. Why the recurrences of neuralgic affections should be less regular than other kinds of periodical disorders, our author is unable to explain. The PERIODICITY not being expected, is probably not observed or noticed as carefully as it should be.

"Even should the nerve be affected at the habitual period, that affection is not always a fit of the violent pain. On the contrary, it may be a very slender one, scarcely noticed by a patient used to much greater suffering; or it may appear as a toothach, or a headach, or what is called a rheumatic pain of the face: and thus, although really a paroxysm of the disease, may deceive both patient and physician; and most of all when, as in the cases last enumerated, it will admit of some common or vulgar name. Such in fact is the character of the neuralgia, in whatever place situated: and the fundamental error here has been founded on that to which I formerly alluded, namely, the assigning it a name expressive of violent pain, and the separating this particular variety from all its analogies and variations. Such are the endless errors produced by ill-chosen terms, and by giving to such terms an improper value. And still further, as I shall hereafter more decidedly show, as this disease is but a mode of the intermittent, it may be exchanged for or replaced by a common paroxysm without any local pain; while even that paroxysm may be so slight as to attract little notice from any one, and least of all from a patient accustomed to much keener sufferings." 26.

When of long standing, however, it becomes, like every other chronic intermittent, a truly irregular disease. It may come as a single attack in the midst of weeks or days of repose, excited by some occasional cause —or it may, in the same way, adopt any modes of irregularity.

Such is the general character of the facial neuralgia—a character that applies to all the varieties of this, as well as of the other neuralgiæ.

VARIETIES.—I. PERIODICAL HEADACH—VERTIGO.

This disorder is of such frequent occurrence, that every man's experience must furnish abundance of examples. Its periodicity is acknowledged—it is generally cured by the remedies employed for ague—and yet its

connexion, in an etiological point of view, with the latter disease, is little, if at all suspected.

"I could quote," (says Dr. M.) "physicians of the highest note, who had submitted to it in their own persons for a long life, even in its most marked and regular form, the tertian, without adopting the obvious plan of cure, and even arguing to the last against the present view of its nature." We think they must have been desperately fond of a disagreeable companion, who would neglect bark, arsenic, and change of air, on such an occasion. Dr. M. considers the present disease as a connecting link between ague and tic douloureux—more nearly allied to the former than the latter, as being void of that acute and dreadful pain, so characteristic of the high grades of neuralgia. The periodical headach, Dr. M. observes, may possess any of the types of intermittent. He has seen it as a double quotidian, as a single one, and as a tertian. He has never said that all the disorders collected under the head of intermittent, must, of necessity, arise from malaria—though he has tried to prove that this poison is often present where it is not suspected. We are certain, only, that malaria is by far the most frequent cause of them. Indeed, it has never been proved that a simple ague will *originate* without this cause, though it may be readily excited afterwards by many causes.

"But when we descend from the simple disease along the scale of varieties, or as the local affections of the nerves begin to predominate far above the general one, I am so far from thinking malaria essential to the production of intermittent, or, to speak specially of neuralgia, that I have made a particular division, where it is demonstrably produced, as far at least as we can demonstrate, by an exclusive cause, even by mechanical injuries." 32.

Dr. M. therefore, does not say or insist, that periodical headach is necessarily or exclusively the result of malaria—though this may be frequently suspected to be the case. Thus, in Spain, the *migrania* is endemic in all marshy situations throughout that country. But, even were it proved that the disease in question was produced by other causes than malaria, this would not affect the theory of its common or generic nature with intermittent.

"The action of malaria is on the nervous system, on the whole and on the parts: or, affecting the whole in a slender manner, it may exert its chief influence on some peculiar nerve or portion of a nerve. And till we know more of their nature and of this action, we cannot pronounce a negative, or say that no cause but malaria shall produce even a simple intermittent: while, if mechanical injury of a nerve can produce a partial one, there may be many other causes, unknown to us, capable of generating a periodical headach." 33.

Be this as it may, the malady in question, is most common in situations of the unhealthy kind already often described—and is frequently brought on directly by the causes which produce intermittents. A still stronger fact is, that it most commonly occurs in those who labour under chronic intermittents or remittents—or who have formerly suffered from those disorders. Still more remarkably, it is found to interchange by paroxysms, with the common intermittent—or the ordinary fever of one day is replaced, on another, by the headach.

"Thus have I seen the headach and the ague-fit occupying the alternate days, a modification which may be considered as a double tertian, and proceeding thus through a long period; while the same species of combination has also occurred to me under the tertian type. Where the chronic intermittent, however, has been of long duration, it is more common for the periodical headach which is united with it to recur in a very irregular manner, as is true generally of the disorder in all its modes, when of such standing: and it is in these cases especially, that its real nature is so commonly mistaken, as it then wants those obvious characters which alone would arrest the attention of a superficial observer." 34.

Dr. M. thinks that the pain in the neuralgia, and all anonymous intermittents, appertains to the hot fit—"and if an absolute general hot stage does not occur, there is that excitement of the vessels, and local heat, often approaching, or even amounting to temporary inflammation, which marks, at least a hot fit—a hot stage, as local as the previous cold one commonly is, just as if the whole intermittent paroxysm was limited to one spot, instead of occupying the whole nervous system." The characters are, in short, those of an ordinary intermittent, with the addition of pain—proving the correctness with which it is arranged as a neuralgic intermittent.

"In the best defined periodical headach, the pained part is generally small, when it may exist in any spot, including the face; and it is a general rule, though not without its exceptions, that in the chronic cases, whatever spot is once the disordered one, it continues so throughout the whole career of the disease; indicating a permanent morbid condition of some nerve, as in the decided neuralgia of the face. And thus, as these cases become severe in point of pain, do they approach so gradually to that neuralgia, that no boundary whatever can be drawn between them; a fact which ought long since to have explained what the neuralgia (Tic) really was." 40.

These localities (of periodical headach) are sometimes so small, that patients say they could cover it with the point of the finger—another character in which it agrees with the TIC. Thus, it is not uncommon, over one eye-brow--or on the top of the head, and so on. Dr. M. has met with no case of clavus hystericus which was not one of the disease in question, though he denies not, that the former may be, sometimes, an original and independent affection.

Hemicrania, another modification of the disease now under investigation, sometimes occurs under a form so slight, that it attracts no notice—at least from the physician—a circumstance, however, that tends to explain some of the errors respecting this disease. Thus, a paroxysm of it, even of a regular and persistent form, may occur as a mere sense of fulness or heat in one side of the face, often attended with lachrymation, or a slight redness of the corresponding eye, or temporary redness of that nostril. This kind of attack is mistaken for cold, weakness of the eye, &c. and its true nature overlooked.

"I must yet, however, notice one point of resemblance between the common intermittent headach, and the neuralgia (Tic) of the face. In the former, as in this, there are often two pains, an acute and a general one, at the same time; while the acute pain also is subject to similar intermissions and exacerbations during the paroxysm. And when the disease is strongly marked, or the pain intense, the confusion of thought formerly noticed frequently amounts to absolute delirium, as the whole disease is commonly attended with those affections of the mind or temper, which were formerly enumerated under simple intermittent fever. Thus further does this disorder, as well as the neuralgia under whatever form, frequently excite the desire for suicide, while the very act itself has been committed; of which I shall hereafter be compelled to notice one peculiar case." 47.

The effects of the neuralgiæ on the mental faculties are analogous to those of intermittents. Hebetude, tendency to fatuity, and other phenomena of mental debility, are among the consequences of long-continued periodical headachs, and indeed most of the severe neuralgiæ.

Dr. M. takes an opportunity here of ridiculing the fashionable term of "determination of blood to the head."

"In the case to which I allude, it has been recently discovered, (for the disorder is of very recent invention) that the blood flows in some very improper manner to the head, even should the patient be a delicate and young female, a pallid and enfeebled, night-watching student, a nervous lady of fashion, exhausted by London vigils, or any one else of all those who were once esteemed to suffer from debility and nervous diseases; a tribe too numerous to mention in detail. Who was, or who were, the enlightened discoverers of this new philosophy, may be asked by those who can themselves answer it: a physician must hope, for the honour of his profession, that it was the discovery of the cuppers, and that it has been propagated by the self-empirics who are now fast becoming the rivals of his brethren, in the science, and of the apothecaries, in the art." 53.

These symptoms, formerly called nervous, and still looked upon by many as sympathetic, are very frequently, according to our author's experience, "the produce of the intermittent affections of the head," which have been described—or are actually cases (if sometimes obscure ones) of the periodical headach—"disorders of a neuralgic character." We fear that the real nature of these "determinations" to the head, is very often mistaken, and that lances, leeches, and scarificators, are not seldom put in requisition when they might safely be dispensed with.

II. NEURALGIÆ OF OTHER NERVES, IN VARIOUS PARTS OF THE BODY.

The minuteness with which our author has described the neuralgiæ of the facial nerves will render it unnecessary to be very minute with other descriptions. Dr. M. seems to have made a mistake in supposing that any doubt remains in the minds of medical men generally as to the extension of neuralgia to other nerves of the body besides the face. This being the case, we need not waste time in dwelling on the proofs of that which we, at once, admit. The proofs of identity, or at least of strong affinity, between the neuralgiæ generally and intermittent fevers, are, of course, drawn from the same sources as those had recourse to, when endeavouring to assimilate tic douloureux with ague.

"Very often we can trace it to the same causes; and while it is cured by the same general remedies as common intermittent, with the addition of such local ones as are found of use in the neuralgia of the face, it is exasperated or rendered permanent by that which is equally maltreatment in all those diseases; while also the very pointed evil consequences produced by the evacuant and debilitating practice, are the very same or exactly analogous to what they are in intermittent and in acknowledged neuralgia, whatever be the place of the pain. Further, these pains, or painful disorders, be the situations what they may, alternate with common intermittent, in the several ways already described as occurring in the local anomalies of that disorder, and in neuralgia and periodical headach; that is, as whole periods, or as mere paroxysms: while, of course, they are also irregularly intermixed with such affections, as happens with respect to the whole of the disorders treated of in this essay, whenever they are of long duration or have become an inveterate habit.

"Thus also, in a patient of this nature, it is not uncommon to find a very great number of all the disorders that have been here enumerated, co-existing or succeeding, and in every possible mode of combination and succession. The same patient, for example, who has suffered common intermittent, will be found to have also experienced more or less, or even the whole, of the anomalies enumerated under that disease, together with the neuralgia of the face, the periodical headach, and a certain number of the neuralgic diseases which I am about to record; all these several affections alternating in different ways among each other, and many being occasionally united; while, what renders the proof of the nature of these last complete, is, that whatever period is the

habitual one of the commonest intermittent paroxysm, the same will mark the recurrence of every one of the affections in question. Such a patient, (and I have seen more than one such,) becomes in himself a perfect nosology of this disease, and carries in his own person a demonstration that ought to convince the most incredulous. Lastly, I have never seen a case of these remote and less common neuralgiæ, where it was not easy to trace that febrile state, which, however slender it may often be in all the local affections, is never absolutely wanting, and ought never to escape the eye of a real physician. The pulse undergoes the same changes, the fit of pain is the hot stage, and the cold stage may be found, at least by means of those delicate tests which I have already pointed out: nor have I ever been introduced to a patient reported as labouring under some unknown and extraordinary painful disorder, that I could not pronounce at once, from the mere physiognomy, (taking care to be present before or at the accession,) what the disease was; provided of course that it was really a neuralgia, as, in truth, has almost invariably proved the fact." 76.

Dr. M. proceeds to the statement of some insulated cases, which, though apparently anomalous in their character, yet bear on the subject under investigation.

Optic Nerve. A patient described the pain in this part, as though a red-hot needle had been passed through the centre of the eye. "As this disorder accompanied an attack of neuralgia in the upper jaw, or rather replaced it, appearing at the moment when that ceased, and as it was cured by arsenic, there was no reason to doubt of its nature."

Testicle. "Of this I have known, personally, but two cases; while I have reason to suspect that it has occurred frequently, and been mistaken for an incipient scirrhus. In one of the cases to which I allude, this error was in fact committed; and after a long period of suffering, the gland was extirpated in the usual manner. It was found to be sound, and, as generally happens when the division of the nerve has been resorted to in the neuralgia, it returned in the cord. This case was known to me, only after this last event; and as the patient was an opulent one, there had been no want of advice respecting the disease. It must be hoped that such mistakes will now become less frequent; while I must not even allude to the place where this one was committed.

"The other case, under my own care, was immediately cured by arsenic; while its nature was rendered perfectly evident by the slight paroxysms of intermittent which attended it, and by its having alternated with another neuralgia. As might be supposed, the pain in this case was extremely violent; and it was described by the patient as rendering him entirely blind, (as he expressed it,) to the surrounding objects; as if the whole world had disappeared from his sight, and all recollection was obliterated. Had such a pain continued even for a few minutes, it must have produced delirium." 78.

Hand and Fingers. Dr. M. has seen many cases of this nature, but describes only two, on account of the particular circumstances attending them. In one, a patient who had suffered from chronic intermittent and neuralgia in various forms, the affection was in a small branch of the radial nerve which runs along the metacarpal bone of the fore-finger. The usual symptoms were present; but the peculiarly superficial position of this nerve enabled Dr. M. to detect a change of structure in it which can seldom be observed, "and which is probably always present, though it has been little suspected." It is a pity, we think, that the precise nature of this change was not determined by the excision of the nerve—an operation proposed by the surgical attendant. The pain was limited to a space which a pea could have covered. In the course of four months, during which the neuralgia lasted, the nerve enlarged so as to form a knot or swelling of similar dimensions —"or, more accurately speaking, about a sixth of an inch in diameter." This part was so extremely sensible as not to bear touching even with a feather, without exquisite pain. This swelling continued after the neuralgia disappeared, but gradually lessened in size, though it has never (after a lapse of eight years) entirely subsided or lost its morbid sensibility. The paroxysms of pain were, in this case, periodical, and attended with redness of the surrounding parts. Blistering invariably increased the malady, and enlarged the circle of the pain and irritation. This is an effect which our author has generally found to follow blisters in neuralgia. Several other curious and obscure cases of neuralgic affections of the fingers are related by Dr. M. but we must pass them over.

Knee. In these cases of neuralgia of this joint, the disease was pronounced to be scrofulous, and to threaten white-swelling.

"In one of the cases, it had lasted five years; and as the pain was very severe, the surprise had long been that no swelling could be discovered by the touch. Had these remote neuralgiæ been then suspected to exist, or had the disorder at large been understood, as I trust it will now be, it could not have remained a subject of doubt for as many days, since the attack was quotidian and accurate; and it is one, yet but one out of thousands of cases, which shows how necessary it is that the knowledge of this disease should be universally spread among practitioners, since the quantity of human suffering that has already resulted from that ignorance is incalculable. I need scarcely say that, in this case, gout and rheumatism had been resorted to for the solution, when, after some duration, no swelling or disease of the bones could be discovered.

"But one further remark on it is worth making. The pain had always been severe; and from that, and its long duration, the constitution of the patient, a female in the better

ranks of life, was reported by the attendant practitioner, to be 'broken down' by the suffering. A mere glance however was sufficient to show, not only that chronic intermittent was present, but that she was labouring under visceral disease, probably in the spleen; and thus it frequently happens in these cases, wherever they occur, that such a state is ignorantly attributed to a 'broken down constitution.' It is scarcely worth while perhaps to add, that the pain soon yielded to bark and arsenic given alternately; but many more months, added to change of air from the unhealthy and marshy situation where this patient resided, were required to quell the simpler intermittent which attended it.

"Of two other cases in this part, it is worth while to remark that the extremely acute pain was situated over the very edge of the head of the tibia, yet between the harder parts and the skin, as the patients determined it; while the affected place was not more than the eighth of an inch in dimensions. As scarcely any accuracy of dissection could produce a visible nerve in this precise spot, it follows that a perfect and intense neuralgic pain may exist in the most minute branches; a fact which has occurred, in my experience, in other parts; so that the want of a demonstrable nerve must not be used as an argument against the existence of the disease generally, any more than it must be permitted to blind the practitioner as to its possible presence in any individual case of difficulty.

"The last of these cases which I think it worth while to notice, was remarkable for its double tertian, or alternating form; a fact not very unfrequent under different modes, and which I have noticed elsewhere. I think, at least, that the term double tertian may be applied to it, from its resemblance to that mode of the simple intermittent in which the two fits are dissimilar, and from its analogy to those cases, not uncommon, in which a fit of neuralgia and a paroxysm of common intermittent occur on alternate days. And it belongs to that class of cases in this disorder, which aids in establishing the common generic nature of all these diseases; being one of the links which connects the most simple and regular intermittent at one extremity, with the most obscure neuralgia at the other.

"In this case there was, on one day, a pain in both the knees, and, on the alternating one, a pain in one arm; and thus had the disorder lasted a long time, to the great discomfiture of the physician by whom I was introduced to it, and who, as might perhaps be conjectured, had considered it as an irregular gout." 87.

Our readers will not fail to perceive that the above is what surgeons have lately called "HYSTERICAL WHITE SWELLING"—more especially Mr. Brodie, and the surgeons of St. George's Hospital. In a late clinical lecture on this subject, Mr. Brodie stated it as his opinion, "that nine out of ten of those unfortunate young women who have been *doctored* (á la Harrison of course) of late years, for '*spinal diseases*,' have really laboured under nothing but *hysterical pains* in the back." In the same journal (the Medical Gazette) there is a curious case detailed of "nervous affection" of the breast, of which the following sketch may be appropriately introduced here.

"The left breast, to the view, was no larger than the right; indeed, on the whole, rather smaller; the skin had the least blush of redness upon it. On examining the gland it was felt to be traversed by a distinct and circumscribed hardness, dividing the upper portion of the gland from the lower. The indurated part was exquisitely painful upon pressure, especially from the nipple outwards to the arm-pit. Pinching, or even lightly tapping on the skin, in the same situation and direction, gave pain, nearly as much, indeed, as firm compression. As the examination receded from the before mentioned line, the pain and the tenderness, *pari passu*, diminished. In the right breast were several indurated spots; much pain upon pressure; and great sensibility of skin. The pain was not aggravated but relieved at nights; sleep difficult indeed to obtain, but when obtained sound and unbroken. Besides the affection of the breast she had pain in the side, brought on and increased by exercise or motion. Her appearance was healthy; the appetite good; the tongue moist, but white; the bowels confined; the menses irregular.

"For the right understanding of the case it is necessary that we should mention the leading features of hysterical pain, at least in the external parts of the body. First, it is as much increased by slightly tapping, or at least pinching the integument, as by actual and considerable pressure. In the second place, the sensibility is not only exalted but actually exaggerated, caricaturing, as it were, the pain of organic disease. Thirdly, it differs from the pain of inflammation in this, that though it may prevent the patient's going to sleep, it seldom or never wakes her from it. This, according to Mr. Brodie, is a decided characteristic of nervous pain. In the present case these symptoms were observed, combined with induration and chronic inflammation in the gland of the breast."*

In respect to the name of the disease in question, whether seated in the knee, the mamma, or any other part of the body, we decidedly prefer the term NEURALGIA to that of HYSTERIA. The latter means nothing, in these cases—the former not only designates the nature of the complaint, but points to the etiology, and even to the treatment.

TIBIA. Many cases of neuralgia of this part have fallen under our author's notice. They were generally mistaken for periostitis, (and why may they not have been occasionally combined with inflammation?) and were treated by mercury and sarsaparilla, under the idea that they were of syphilitic origin.

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* Medical Gazette, No. 45.

This treatment often succeeded, because mercury and sarsa are usually beneficial in neuralgia, and these cures would, of course, confirm the practitioner in his erroneous view of the disease.

Rectum. Of this Dr. M. had an opportunity of seeing one well-marked case, and of observing its phenomena very minutely. He had to maintain his opinion against almost an army of medical men—no one, at that time, conceiving that neuralgia could be seated in any other part than the face. The case in question is a very curious one, and we are tempted to give it in the author's own words.

"At the first attack, and for some weeks, it consisted in an occasional sensation like a spasm, apparently situated in the urethra, about the prostate gland, recurring three or four times a day, and causing little uneasiness. Gradually, these sensations increased in frequency, and were attended with a general sense of irritation about the neck of the bladder, very much increased by walking, and at length producing spasms in various parts, with a tendency to an hysterical paroxysm. No apparent fever of any kind was at first present; nor any suspicion of its real nature entertained; while the disorder, not yet strictly periodical, was referred to the urethra and bladder. Very shortly, there supervened a debility, with occasional numbness, in one leg; and it was easy to trace, by the tingling sensation formerly described, the course of the fibular nerve. At the same time also, it was perceived that the mere act of bending the neck forwards, brought on the sensation in the perineum, and further, caused the patient to totter on the affected leg, a circumstance to which I shall have occasion to recur hereafter.

"After enduring some weeks in this form, there supervened a febrile state, at first very obscure, but which was, after some time, ascertained to be a double quotidian with a nocturnal and diurnal paroxysm. Still, the nature and the real seat of the pain was obscure; nor was the slightest suspicion of neuralgia entertained by the numerous medical attendants who in succession examined the case. Such however it appeared to me; and after some further progress, every doubt in my mind, if not in that of others, was removed by the increased regularity of the disease, and by the pain in question becoming as regular as the attacks of neuralgia are when most perfect. In this state, the first of the quotidian paroxysms was simple, and the second was attended by the neuralgia, which, now increasing in decision, increased also in severity. In this aggravated state also, it became plain that the primary seat of the pain was in the rectum, the patient describing it as a burning heat, as from a heated solid introduced, which was shortly communicated to the bladder, producing irritation and strangury. When of this severe nature, that irritation extended even round the thighs and over the lumbar region; so that the slightest touch produced great uneasiness, as happens in violent cases of the neuralgia of the face, and was felt even in the abdomen, as if the whole colon was affected in a similar manner; which was probably the fact.

"Further, during the severity of the attack, all the limbs were affected with spasms, and very generally there supervened a regular fit of hysteria, with a great degree of general derangement throughout the whole system, consisting of the usual symptoms of a severe remittent in all their worst forms. Lastly, and not to be unnecessarily minute, as the irritation of the bladder appeared to spread along the ureters to the kidneys, there came on diabetes, the diabetes mellitus; while, when this symptom was peculiarly severe, it was attended with an acute pain in the left, but not in the right kidney, so that possibly this particular symptom was confined to one of the glands only. And respecting this part of the disease, I must further add, that it was rigidly paroxysmal, or that the morbid secretion of sugar commenced with the general fit, and entirely disappeared in the interval." 95.

The patient had been subject to intermittent, and also to neuralgia, under various forms, for a long course of years—"and this was one of the relapses—a relapse which was often afterwards repeated." Although with the repetitions, the severity of the disease abated, yet, "on no one occasion did the period of the attack, and the continuance of the pain, vary, by even half an hour, from those first established." The cure of these relapses—or the mitigation of their severity, was effected by the remedies which succeed in neuralgia and chronic intermittent—and the disorder was brought back by every debilitating cause.

Thigh. Dr. M. has seen many cases where the neuralgia was seated in the thigh—especially in the anterior crural nerve, at the exact flexure of the thigh—and also in its ramifications as low as the middle of the limb—in the former case, shooting, as sciatica does, and with similar severity, down to the toe. Although the paroxysms were not regularly periodical, yet there was always a period of the day, in which the neuralgia was wanting—and this period was always the same.

Kidney. Dr. M. has met with but one case of pure neuralgia in the kidney, unattended with diabetes, or the increase of urine.

Sciatica. This species or form of neuralgia has perhaps attracted more attention than any other—probably on account of the great severity of suffering which it occasions. It gives our author a fresh opportunity of satirising physic and its professors, in respect to the vague manner in which the science, if such it may be called, has been prosecuted. Thus, Cullen and others have ranked sciatica with rheumatism.

"Why was it ranked with rheumatism? because it was a painful disorder: such are the reasoning processes of physic, yet it complains of difficulties. And what is rheumatism? a painful disease also; 'a peculiar affection,'

says Cullen, 'of the *muscular fibres*, with an inflammatory disposition in the system at large.'" 110.

Dr. Cullen having thus classed it with *muscular* affections, passes over it as unworthy of regard—"proving further that he looked upon it but as a variety." Nevertheless it was long ago discovered that sciatica was seated in the nerve, though this led to no results—and Cullen treats the opinion and its author with neglect.* Living writers and practitioners consider sciatica as seated in the nerve. Its theory has been derived from the neuralgia of the face—and, in short, it is tic douloureux of the sciatic nerve. In looking over ancient and foreign authors, we find notices of sciatica attendant on intermittent fever, or succeeding it, and of the same disease having periodical returns with or without intermittent. There are even cases, (as related by Werlhoff, for example) where bark was administered, on those grounds; but still the disease was never placed in its proper position as a neuralgia, till recently. Even now, our author thinks, little has been gained, in consequence of the error committed by the attempt to connect it with *inflammation* of the nerve, or its covering—an error which "can only lead to wrong practice."

"It is on this view of its nature, that we can explain the peculiar intensity of the pain; a pain, both for quality and violence, bearing no resemblance to that of rheumatism. On this view also, we can explain its confined nature, the absence of inflammation, the state of diffused irritation about the parts which attends the fit of pain, the shocks which accompany it, resembling those of all the neuralgiæ, and its propagation along the course of the nerve. And if these peculiarities are thus explained, so are they the proofs of its real nature; while similar and further proofs are found in the paralytic affection which so often follow it, and which, as I have already shown, and shall more fully show hereafter, is a frequent consequence in all neuralgiæ, particularly under bad or wrong treatment. If spasms in the adjoining muscles, or throughout the body in general, occur in sciatica, so do they in all the neuralgiæ; and it is further remarkable that it produces, in irritable habits especially, hysterical symptoms, as do the other disorders of this nature, together with a general irritability, both of mind and body, which seems to belong peculiarly to the painful diseases of this nature." 117.

It will be objected, adds Dr. M. that sciatica is not so strictly periodical as this theory would demand. But what has been stated respecting other neuralgiæ will probably apply to this—the periodicity has often existed without being remarked or recorded. But there is no want of recorded instances of its periodical character. An acute medical friend of the author, "residing where this disorder is endemic, now constantly observes this character, which, till pointed out to him, he had overlooked, or, in fact, had never once perceived." He now seldom fails to discover, also, the intermittent fever, even regular, when he finds it to connect itself, as to the place of its endemic occurrence, with neuralgia of the face.

"When further he writes to me, that since he adopted arsenic at my suggestion, he seldom fails to cure it, and lastly, when we know that in the ancient cases, change of place or air is the best remedy, I can scarcely believe but that when these opinions shall become more universally spread, I shall see the same testimonies from many other quarters, and that this most painful disorder will no longer be that opprobrium to physic which it so long has been." 119.

In fact, if the absolute paroxysmal and intermittent character of sciatica is not frequent, it seldom happens that a distinct exacerbation is not to be found—though this is generally overlooked, in consequence of the very vulgar philosophy, of the patient's—"becoming worse when he is warm in bed"—in other words, when the nocturnal paroxysm obtains. In short, our author avers that he has never failed to recognise "the intermittent febrile paroxysm, under all the characters or variations which attend it in neuralgia in general." By this, Dr. M. does not mean to infer that sciatica is always the product of malaria, since he has already shown that the other neuralgiæ often arise from simple causes—even from local injuries.

"It is observed to be peculiar, in a general way, to certain situations, or to be a sort of endemic, in those, while little known in others; and thus for example, it is extremely common in Cumberland and Westmoreland, among the peasantry. It is a singular analogy to this, that, in a certain district in Wales, the neuralgia of the face should be the common form of the disease, while the sciatica is, comparatively, little known; but how much further such facts may extend, we have as yet no information; and for the plain reason, that we have had no observers and no philosophy. I do not pretend even to imagine a cause; but, if it is of any value, or rather if it may ultimately be of any value when our knowledge of these diseases shall become more extensive, there is something similar to this in the common intermittent, as I formerly observed; since there are certain situations which produce quotidian or tertian, or quartan, in preference, respectively, to the other forms. And if what I have attempted to prove in another place be true, namely, that the enlargement of the thyroid gland is caused especially by the malaria of alpine valleys, here is another fact and an analogy, seeming to prove that there are distinct modes of malaria productive of distinct disorders." 124.

NEURALGIA OF THE GLANDS. Passing over a chapter on "Questionable Neuralgiæ," which deserves perusal, but on which we dare not linger, we come to a chapter on neuralgic affection of glands. Considering the abundant

* Cotunnius on Ischias Nervosa.

supply of nerves to glands, we need not wonder that the functions of these organs should be disturbed by neuralgia. An abundant flow of tears and saliva has been observed in neuralgia of the face. In some cases of tic, or headach, there is a copious discharge of water from the nose. Dr. M. has known this amount to a pint in a very short time. A *catarrhal* intermittent has been admitted by many writers, as also an intermittent *diarrhœa*. A remarkable instance of diabetes has already been noticed by our author, as evidently dependent on a neuralgic affection of the kidneys, which continues to come on periodically even yet, after six years' duration.

"The attacks, during this whole period, were, on every occasion, as strictly periodical as they had ever been, though the relapses became gradually irregular in recurrence and duration both, as happens in all the very chronic cases of these disorders. Nor, in any instance, did the commencement of the saccharine secretion differ from what had been the former hour of the attack of the intermittent, or proceed beyond its ancient limits; occupying six hours of the day. In the interval of the paroxysms, the secretion was perfectly natural, as it was in the greater intervals of the relapses." 143.

These and other examples show, Dr. M. thinks, that neuralgic affections, extending to the nerves which supply the glands, can influence the secretions of those glands, merely in the way of *increase of action*, the case of diabetes forming an exception to the general rule. The facts, however, on which this theory rests, are rather too few, as yet.

"If the neuralgic action on the nerves, and subsequently on the vessels of the few glands that have been noticed, can produce the effects that we have here seen, and if, further, it can produce those very singular inflammations that will hereafter be pointed out, we have a pathological power, the extent and action of which, as exerted on different parts of the compound animal structure, we can imagine to be both various and considerable; a possible cause of diseases the nature of which is still obscure, and a solution of difficulties, which, if it still stops where all pathological investigations do, advances us yet a certain step in this difficult inquiry." 145.

NEURALGIA FROM INJURIES.

The eighth chapter of the work before us is dedicated to the above subject. But we have not space to dwell upon it, especially as the author confesses that he has few facts of his own to produce, and as we have, in many parts of this journal, given the results of modern experience on neuralgia from injuries. The first, as well as the most pointed, case occurring in our author's experience, we shall quote in this place.

"The patient was a young woman, and the injury was simply the prick of a needle in the end of the middle finger; its consequence being a regular periodical neuralgia in that finger; which also did not occur till a few days after the accident. As some weeks had elapsed before she applied for advice, it was easy to ascertain the fact of the periodical and quotidian regularity; while, at that time, the affection of the nerve extended all the way to the shoulder, exactly in the same manner as it does in sciatica and in other cases of spontaneous neuralgia. And as, further, some time elapsed before I could effect the cure, I had abundant opportunity of satisfying myself respecting the real nature of the disease. That it was cured by means of arsenic, will perhaps, to many physicians, be an additional proof that I had judged correctly respecting its nature. I shall only add, as to this case, what may be an useful hint to practitioners in such instances, that the patient herself had no suspicion of the regular or paroxysmal nature of the pain at the time of her application; and that as it was from my own previous views that I was led to make the inquiry, so it was not without much cross-examination that I was enabled to get the information which I afterwards confirmed by my own observation." 152.

In a second case, a bruise on the arm was followed by a regular neuralgia, of a quotidian character, seated in the middle of the radial nerve, and extending to the shoulder. The cure was effected by arsenic.

The third and last case was neuralgia of the toe, quotidian also, and the result of a blow or bruise. The injury was trifling; but the severity and duration of the pain were great, and continued for more than a month, not in the joint but in the very extremity of the toe. The patient was a medical man, and naturally enough, would not take any medicine for the complaint, though urged to do so by our author. The pain lasted nearly the whole of each day, and vanished every evening. The cure, at last, was spontaneous—an event by no means unusual in many neuralgiæ.

TOOTHACH.

The ninth chapter, on toothach, occupies 80 pages of letter-press. This may seem preposterous. But we entirely agree with Dr. M. in believing that the man who should discover a rapid remedy for a common *catarrh*, would be a greater benefactor to his race than he who should find out a specific for hydrophobia—the most terrible affliction to which humanity is subject. If there is any one disorder on earth—at least in civilized society—which is universal, it is the toothach. Yet, while its frequency has rendered all classes familiar with the evil, the theory and treatment of the disease have been taken almost entirely out of the hands of physic, to be lodged in the hands of those who can hardly be supposed to be the best philosophers. Dr. M. therefore, does not expect to produce conviction, whatever arguments or evidence he may offer in support of the doctrine, that "toothach, in all its modes, is a neuralgia, and

nothing more—a variety of the general disorder under consideration."

"There is, in the first place, a term, a name as old as physic; and I need not again say that a successful and popular term is, in itself, philosophy; cause, theory, every thing; or that it stands at least in lieu of all reasoning and all investigation. It is the toothach; that is sufficient: after the philosophy is established, the remedies follow of course, and, in this case, it is extraction, the amputation of the imagined seat of the disease: the remedy of the Dracos in legislation for the extirpation of moral diseases.

"As an aid to this reasoning, the very ground-work perhaps of the whole, toothach is pain, pain in a tooth; and thus the entire definition, the whole philosophy and theory, are comprised in this sole feature and term. But when this pain is present, the tooth is frequently unsound, diseased, carious: and thus is the opinion that the pain proceeds from the visible disease, more firmly fixed, while this leading variety becomes the type and parent of the whole. Thus, if the tooth is not really carious, it will be so hereafter, or it ought to be so; or it is diseased in some other manner, (ingenious men find out that there is an abscess concealed,) or, as even Cullen has determined, 'it is always dependent on some immediate application of acrid matter to the nerves of the teeth,' or, in short, (for who shall find reasons for those who have none?) it is a diseased tooth in some way, because it gives pain, and therefore it must be extracted: while at this conclusion does Cullen himself arrive." 173.

And if after all, the disease is not in the tooth, but in the jaw, then it must be in the roots, or in the antrum maxillare—or somewhere else—but still it is TOOTHACH, and the tooth, or all the teeth, must be extracted! The following passage, among a thousand others, exhibits an exquisite specimen of our author's sarcastic style.

"It is not here my business to inquire into the utility, or rather the inutility, of a dentist and his operations: nor to encounter, unnecessarily, the prejudices respecting the wonderful value of his various arts, which are entwined with the most invincible feelings of our vain nature. Yet I may question whether he who is an ingenious workman in ivory, he who is a vendor of secret powders and washes, he whose strength of hand is not checked by any superfluous refinement of feeling, or he who knows no more of the human anatomy than that some teeth have one root and some three, is exactly the fit person to reason about the diseases of the human constitution, or to be intrusted with their cure; and, most of all, where, to blind habit and mechanical practice, there is occasionally added a small bias of self-interest." 175.

Dr. M. then enters on the investigation of toothach, forming a division of the disease into varieties, upon a plan of his own. The following extract could not, with benefit, be abridged.

"The heads under which toothach is divided, may, for the present purpose, be conveniently rather than correctly, assumed as the following: but they are very indefinite divisions as they run into each other, and as individual cases present endless modifications.

"It may be rigidly periodical: while, in this case, it may be either combined, or not, with chronic intermittent fever: and further, in this case also, a tooth, or teeth, may be sound, or carious, this condition being here considered incidental, not essential. Or, it may be irregular in its paroxysms, under all the same variations; and in both of these varieties, it passes into the common neuralgia of the face; or, cases occur, in which either name is equally applicable. This is the periodical toothach so familiar to those who have paid the attention to this subject which it deserves, but which is so very often overlooked, not merely by the physician, but very generally, if somewhat more remarkably, by the patient; as, by the former, its passage into highly marked neuralgia seems equally to have been neglected, and most so when a carious tooth is present.

"In these forms, it is here considered as spontaneous neuralgia; while, in the next place, it may occur, either casually, or more regularly, that is, under all the variations of that general disease, and traceable in a marked manner to a carious tooth; the pain being fixed in the nervous branch by which that is supplied, or originating in that and spreading from it. In that form it is here referred to neuralgia arising from an injury to a nerve.

"Further, as happens in cases of common neuralgia, the excitement of the minuter vessels may be such as to produce temporary and paroxysmal, or, more permanent inflammation in the membranes, or generally about the face; when it becomes rheumatic toothach or rheumatism of the face, (neuralgic inflammation.) The chief varieties here, are produced in the following manner. The general (rheumatic) inflammation may, as I have just suggested, be paroxysmal and periodical, and even regular, or it may be permanent; while it may attend a carious tooth which is pained, or free of pain, or else a sound tooth in a state of pain; and such pains under any mode of regularity or otherwise. It may also be accompanied by a neuralgic pain independent of the general pain of the inflammation, and not in a tooth; in which case, it is plain, it belongs most unquestionably to neuralgia, though, in the usual practice, ranked with toothach.

"Or, lastly, all other pain but that of the inflammation itself may be wanting, when it becomes, most strictly, what is called rheumatism of the face: this state also, sometimes occurring, even without the presence of a carious tooth. If this rheumatism of the face with separate neuralgic pain should in correctness have been ranked under common 'Tic,' the last division, also, in a more scientific arrangement, should have been reserved for a distinct section: but its obvious affinities and

the received usage render it convenient to include it in the present one; particularly as its limits with respect to the former varieties are indefinite." 179.

The rigidly periodical toothach is by no means a rare form of the disease; but its periodicity must be SOUGHT, otherwise it will seldom force itself on the observation of the routine practitioner.

"Any person who chooses to seek for them, will find cases where the periodical return and the paroxysmal duration of toothach are as regular as those of the most regular neuralgia or intermittent fever, and under every variation under which these occur. And this is equally true whether there is a carious tooth or not; while, where that is not present, these cases, by occupying a particular spot or region, and by the quality of the pain, pass gradually into the common and regular neuralgia of the face (Tic) by gradations so insensible as to have no defined boundary." 181.

Dr. M. has laboured, and with considerable success, to show that neuralgia of the face appears under endless shapes, both as to place, and the nature or intensity of the pain —and, among other forms, in that of toothach.

"Or, to state this more particularly. If the inferior maxillary nerve can be affected with neuralgia in its trunk, that affection is, admittedly, not limited to any one point. Let us pursue that point as a mathematical fluent. It proceeds along the nerve till it arrives at the place where the ramification is given off to a tooth; it proceeds even into the tooth, and the *name* is then changed to toothach. But change of name is not change of disease: or if it be so, let the opposing assertion define the point in this fluxion, where the cessation takes place and a new element of equation must be adopted, or where a new disease commences. To determine thus, is to be guided by terms, not by facts or reasoning: this is the very empiricism of which I have so often had occasion to complain; unworthy of science, as it has been the eternal obstacle to the progress of physic." 189.

Dr. M. critises very sharply the various modes of treatment which have been employed for the cure of toothach, more especially excision and extraction of the tooth. "The abettors of this practice must be content to reflect that they hope to pull the disease out together with the tooth."

"Assuredly, no physician, no one capable of reasoning, would attempt, on principle, to remove the pain produced by, and in, a diseased branch of a nerve, by removing the teeth which are supplied from its minuter ramifications; since it would be as if he were to attempt the cure of sciatica by cutting off the toes." 211.

The establishment of a just theory will, Dr. M. thinks, put an end to the practice of tooth-drawing altogether, as far as it is practised for toothach. Extraction, he maintains, cannot prevent the return of the disease, "otherwise than as, in the case of a carious tooth, they may, like stuffing or filling the cavity, prevent the future operations of the exciting cause, which, in the case of exposed nerves, so often induces a fit of the disorder."

"As I defer the question of carious teeth for the present, the simplest case of this nature is that where there is a pain referred to a single sound tooth; in which, if it does sometimes happen that the pain is thus rigidly limited, it more commonly extends along the cheek or jaw, marking the neuralgic action; while, not unfrequently, the real seat of the pain is there, and the tooth suffers only by extension of it, as in the other cases of neuralgia formerly described.

"When extraction is resorted to for this kind of toothach, there is sometimes a cure, the cause of which I shall hereafter attempt to explain when speaking of carious teeth; and every cure, of course, unfortunately maintains the practice, while it is seldom inquired how often the operation fails. Very commonly, however, it happens, that immediately after extraction, the patient perceives that the pain continues, or is in the next tooth or teeth; in which case the operator is very often unjustly accused of having extracted the wrong one; when a resolute and confiding patient will sometimes submit to a second or a third loss, though even then the pain will continue. It may perhaps continue still in the neighbouring teeth; though more generally, where this pain has been limited as to the teeth themselves, it disappears from the places of those which have been extracted, continuing in the jaw, or in the leading branch of the nerve. The toothach is then sometimes reputed to have been cured; and the pain of the face is attributed to the operation, or to rheumatism, and is expected to subside; but as it would be endless to detail all these events, I shall not dwell on them." 215.

Dr. M. considers that the exposure of the sensible interior of a tooth, or of the nerve, as it is commonly called, which occurs in a perfectly carious tooth, may be an exciting cause of neuralgia in that nerve. Or the nerve may be diseased in that point; in which cases, extraction may cure the disease, effectually and permanently. Another way in which extraction appears, at times, to relieve toothach, is by exciting pain or temporary disorder—or by the shock which the operation and alarm give to the constitution. Such things occasionally effect a cure in other neuralgiæ, and in intermittents. On the other hand, where there is a tendency to neuralgia in the habit—or the disease is chronic, in the form of toothach, &c. the effect of the extraction may be a removal of the fit of pain, or a cure of the particular paroxysm, or series of paroxysms;—while the disease returns again whenever the unknown constitutional causes, or the fresh application of exciting ones, brings it into action. It is a strong argument in favour of our author's doctrine, that carious teeth do not always, or perhaps generally, produce toothach—even when we

know that the nerve is exposed, by its sensibility, to stimulating substances. In short, we see thousands of teeth wasting away through years, with the nerves exposed all the time, and yet without toothach. The rational deduction from this is, that the disease does not essentially consist in such exposure or caries, but that something else is necessary —that the said exposure and caries are only occasional causes. But our limits are so near a close that we must abandon all hope of presenting a full analysis of this, the longest chapter in the work. We shall therefore conclude this article with the summary or chief arguments in the words of the author.

"Let me now however, in concluding, sum up the chief arguments as to toothach, in a condensed and somewhat more logical manner, since they will thus be more impressive than under the diffused illustration which I have been obliged to use in explaining the connexions of all the varieties of this disorder. That they involve a series of pure syllogisms, *ought* to render them convincing; that this will do so, is a very different assertion.

"Neuralgia is a pain occupying some point in the nerves of the face, among others; and it may occupy any point in any large branch which supplies the teeth, among other nerves of the face. The pain which it produces is the same pain, whatever be the nerve or part of that nerve affected. The pain of toothach is the same pain, and it is seated in an ultimate extremity of the branch which supplies the teeth, or in more. If that pain is not neuralgia, then it must follow, that although every point of that nerve, when pained, is suffering from neuralgia, let that pain exist any where, from the brain even to the extremity, the very last, ultimate, point thus suffering, suffers from a different disease. Reductio ad absurdum.

"Neuralgia is regularly intermittent and periodical, or it becomes irregular, under various modes, and from causes, of which many are assignable. The same is true of toothach. Neuralgia is often, or perhaps generally, attended by a peculiar constitutional affection, ascertained to be a chronic intermittent, and when highly marked, there is a febrile paroxysm accompanying the pain. All this is true of toothach. Neuralgia alternates with intermittent fever, by relapses; so does toothach: it alternates with it by paroxysms, and toothach does the same. And in both, the types may be quotidian, tertian, and double tertian, or perhaps more: while, in both, the disease may be similarly doubled; or, being a double tertian, may consist of a paroxysm of the pure intermittent on one day, and of the neuralgia, or of the toothach, on another.

"Neuralgia is attended by heat, and by excitement of the minute arteries, accompanied by general diffused pain, or irritability, or both; and so is toothach. Neuralgia and toothach are united, or simultaneous: or, the pain and place of the pain may be such, that neither the physician nor the patient can determine what the disease ought to be called. Neuralgia passes into or produces toothach; and, reversely, toothach passes into or produces neuralgia. The two pains alternate, in various modes; or that which was neuralgia at one period, be that of day, hour, or minute, or even instant, may be toothach in the next; or the reverse.

"Neuralgia is produced by the injury of a nerve. So is toothach: and this is the case of a carious tooth. And if toothach from this cause is especially frequent, it is that the caries of a tooth is very common; and that there are not, in external circumstances, or in the body, any frequent means of thus injuring, either through accident or disease, the branch of a nerve elsewhere.

"Toothach, when regular, is cured by the same remedies as regular neuralgia. In many instances it is thus cured even when irregular: and if such cure is not more frequent, it is because physicians have not thus attempted it: not having taken that view of this disease which I have here endeavoured to establish." 244.

We have now got through the first half of the last volume of Dr. M.'s work, and shall be able to conclude the whole, in one more article. It may seem remarkable, that not one of our contemporaries has attempted an *analysis* of the work before us. We ourselves are at no loss for a solution of this enigma. In the course of our lives we have hardly ever encountered a more difficult task than an *analytical* review of Dr. Macculloch's volumes. The reason will be obvious to those, and those only, who peruse the work. We do not regret our labours. The views which the ingenious author has opened out, will shed lustre on his own name, and on the profession to which he belongs, (however severely he may have satirized its professors) long after the spirit has deserted its tenement of clay, and the tenement itself has ceased to retain any mark of its original form or identity.

Medical and Philosophical Intelligence.

On the difference of Effects produced by the Drinking of Animal Jellies and Vegetable Mucilages in Spasmodic Asthma, and other Pulmonic and Bronchial Affections. By Mr. Kerr. —During several years of my life, I had frequent opportunities of observing patients la-

bouring under spasmodic asthma, and one circumstance that particularly astonished me was, that when the violence of the paroxysm was increased by the use of *vegetable mucilages*, such as linseed tea, decoction of althæa, and other similar preparations, relief was invariably afforded by draughts of *animal jelly*, rendered liquid by warm water. The jellies generally employed were the calf's-foot and leg of beef. Of the general application of this observation, I am perfectly satisfied, so much so, that I invariably recommend patients suffering under spasmodic asthma, to drink of diluted animal jellies. The theory to be offered in explanation, I decline giving, not from any desire of self-possession, but simply on the conviction of the duty of being submissive to the useful dicta of the Baconian system of induction. I am always afraid of theorising too soon.*—*Lond. Med. and Surg. Jour.*

Case of Hypertrophy of the Brain, related to the London Phrenological Society. By Dr. Elliotson.—The case was that of a boy, twelve years of age, who had a head so large that any man, said Dr. Elliotson, might have been proud of it. Indeed, it was so considerable, that the neck with difficulty bore its burden. The boy used generally to recline on a sofa, and thus rest his head. But, though so large, the child had no indications of disease in his head; there was no symptom of hydrocephalus. He used always to seek the company of persons older than himself, and nothing pleased him more than to converse on the best forms of human governments. Political economy was his delight. He was attended medically by Dr. Elliotson for diseases of other parts of the system, being scrofulous. He complained a short time before his death, which was sudden, of a slight pain in his head; hemiplegia afterwards came on; apoplexy, indicated by all the characteristic symptoms, followed, and he died. On opening the body after death, the cerebral structure was healthy in appearance, and consistence; the vessels were very turgid, and the brain was of an immense size.

His reflective faculties were larger than the perceptive; the organ of secretiveness was large, and, as an illustration of its activity, his mother, who testified to his affection, added, that he always *kept something* back.—*Ibid.*

Remarkable Superiority of Amputating by one Incision through the Integuments and Muscles.—This great improvement in the mode of amputating, which was formerly recommended by Louis, and unaccountably abandoned, is practised and highly recommended by all the present surgeons of the Hôtel Dieu, M. Dupuytren, M. Breschet, and M. Sanson. In thighs removed by the two former, and an arm by the latter, no tourniquet was employed in either case. The limb was grasped by an assistant, and pressure made on the principal artery. A single incision cut through skin and muscles down to the bone, and a retraction of the skin and muscles not inserted in the bone was effected to the extent of three inches. The first retraction having been completed, the muscles attached to the bone were cut through by a scalpel, on a level with the others, and the bone sawed as usual. The stumps in all were remarkably fine, and the extremity of the bone was more than sufficiently covered.

After each operation, the surgeons respectively explained their reasons for preferring this procedure, whose expediency was proved by the result of every case in which it has been tried of late. To say nothing of the discarding of the tourniquet, which enables the operator to effect a retraction of the muscles to a greater extent than under its use; the old method of preserving the skin by cutting it up from the muscles to which it naturally adheres, was a considerable impediment to union by the first intention.—*Lond. Med. and Phys. Journal.*

Watery Extract of Aloes.—Mr. Battley has made some simple experiments on the aloes vulgaris, or Barbadoes aloes, by which it appears that the cold watery solution, evaporated to the consistence of an extract, contains all the valuable part of the medicine, divested of its acrid or drastic principles. The following is the process employed.

"I.—Two pounds avoirdupois, or 2 lbs. 4 oz. 2 drs. 48 grs. apothecaries' weight, of the extract of aloes, in the state in which it is imported from Barbadoes, imparted to cold distilled water 1 lb. 9 oz. 1 dr. 42 grs. The solution was of a fine yellow-brown colour; its taste intensely bitter, yet free from the flavor peculiar to this species of aloe.

"II.—The residuum of I. imparted to hot distilled water 2 oz. 15 grs., leaving 4 oz. 2 drs. 15 grs. of undissolved matter. The solution was darker than I., inclining to purple, less intensely bitter, but having the peculiar flavor of the aloe vulgaris.

"III.—The residuum of II. imparted to alcohol 3 oz. 4 drs. 48 grs., leaving 5 drs. 27 grs. insoluble in this menstruum. The tincture was of a deep brown colour, bitter, and very offensive both to the taste and smell.

"IV.—The residuum of III. imparted to one part of liquor potassæ, diluted with seven parts of water, 4 drs. 48 grs., leaving V.—79 grs. of a dark earthy appearance, deprived of all aloetic properties, and void of any qualities that the taste or smell could detect. Even the alkaline solution IV. of a deep heavy brown colour, was so slightly aloetic as to be nearly insipid and inodorous.

"In I., or the cold solution of the aloe, again reduced to an extract, the profession

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* These circumstances we beg to recommend to the notice of our medical brethren, and perhaps some one will favour us with his views on the subject. We may add too, that the utility of animal jellies extends, according to Mr. Kerr's observations, to other pulmonic and bronchial affections.—*Editors.*

will find at its disposal a valuable medicine; but the results II., III., will probably be found to be too drastic, and IV., V., absolutely inert."—*Journal of Morbid Anatomy.*

Neuralgia.—Dr. Wilson, the talented author of a work on West India Fevers,* reviewed in a former number of this Journal, has transmitted to us some observations on the dreadful case of Neuralgia lately published for consultation, in No. XVIII. of this Journal, page 435.† We shall take the liberty of quoting a passage from Dr. Wilson's letter, as it contains some practical facts of interest and utility.

"In three cases of neuralgic disease lately under my care, a cure was effected by the combination of calomel, opium, and oil of turpentine. In my Memoirs of West India Fever, I there stated my belief that the oil of turpentine not only accelerated the action of mercury, but, also, in certain cases, increased its curative effects. In the neuralgic cases to which I allude, I gave the turpentine chiefly with the view of speedily inducing the specific action of the mercury. I am now, however, inclined to believe that the turpentine operated beneficially in itself. The following is the mode of administration which I have employed in the three neuralgic cases above mentioned.

"A pill, containing from two to four grains of calomel, and one or two grains of opium, was given each night at bedtime, and, next morning, one or two drachms of oil of turpentine, mixed with a little honey. In each of the three cases, a complete and permanent cure has been effected by this plan, and in a moderate space of time."—*Med. Chirur. Rev.*

Cartilaginous Degeneration of the Stomach.—A middle-aged female, who, for twelve years, had had a moveable, round, firm tumour in the abdomen, which, by several physicians, had been declared to be a degenerated ovary, applied to Dr. Dieffenbach of Berlin; who, after a careful examination, was of the same opinion; and as the patient had never experienced any pain in the stomach, nausea, vomiting, or any of the symptoms by which a scirrhus of the stomach is generally accompanied, was very far from suspecting disease of this organ. The patient, however, soon died; and, at the post-mortem examination, it was found that the tumour was formed by the stomach, which was in a state of cartilaginous degeneration; its anterior paries was an inch thick; and, except a small portion of the posterior paries, the whole stomach was changed into a firm, incompressible sac. Digestion, which, during the patient's life, had been but very slightly disturbed, must, in this case, necessarily have been carried on independent of the mechanical action of the stomach.—*Rust's Magazin.*

Destruction of the Right Hemisphere of the Brain—Hemiplegia of the left side—intellect unimpaired.—A hemiplegic man, 32 years of age, died after the usual symptoms of phthisis pulmonalis, which, as well as disease of the heart, was ascertained by post-mortem examination. The cause of the paralysis, however, was still to be sought. On opening the skull, it was perceived that a considerable mass of fluid was poured out between the brain and cranium. The hemisphere of the right side was wasted and reduced to a mere membrane; the cerebral substance had disappeared; the optic and olfactory nerves of the right side were shrunk, as were the corpora olivaria and tubercula quadrigemina of the same side. In the words of the narrator, "it was not a brain that I found, but only the half of one." Yet the intellects of the patient were unimpaired. —*La Lancette Française.*

Emphysema of the Thorax, Simulating Fracture of the Ribs.—A man, 56 years of age, came to the Hospital de la Pitié last Sept. complaining of very acute pain of the right side of the chest at its posterior part, and about the situation of the fifth rib. The pain was increased by pressure, by coughing, and by lying on the affected side; there was slight tumefaction, and a crepitation was perceptible analogous to that resulting from fracture, but more superficial, more clear, and more diffused; this noise was like that of starch broken between the fingers. Besides, when the pressure was continued, the crepitus became more rare, or disappeared, and then it might be felt at a distant point. The respiration, although frequent, was distinctly heard—there was little of the mucous râle. What was the disease? The patient had not constant pain in the part—it was not fracture, for he had met with no injury. The pain came on during forcible lateral flexion of the trunk, when he stooped to pick up any thing. It could only be a spontaneous emphysema, which was circumscribed like that observed by Desault, Murat, and some others, under the pectoralis major, in the efforts at reduction of the humerus. The patient left the hospital in a few days cured.—*Ibid.*

Inflammation of the Veins of the Uterus after Parturition.—M. Dance, in a memoir just published on Uterine Phlebitis, has related from his own observation, and from the works of Andral and Louis, eleven cases of fatal inflammation of the veins of the uterus, with the appearances which were witnessed on dissection. This most dangerous form of uterine inflammation was observed to commence most frequently a few days after delivery, with rigours, general uneasiness, suppression of the lochia, and pain and sense of weight in the hypogastrium. The size and sensibility of the uterus gradually increased, the expression of the countenance became greatly altered, and

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* Vide Journal of Foreign Medicine, Vol. I., page 342.

† Ibid., Vol. III., page 58.

prostration of strength, with delirium, and other symptoms of typhoid fever, rapidly succeeded, and destroyed the patients. This disease was observed in several cases to be complicated with extensive disorganization in remote organs of the body. In three cases severe pulmonary symptoms occurred, and on dissection purulent deposits were found in the substance of the lungs, with pleuritis and effusion into the sac of the pleura.

In another case an inflammatory swelling suddenly formed around one of the joints. The veins of the uterus were in most of these cases found inflamed, and in a state of suppuration, and the substance of the uterus had become preternaturally soft, and of a dark colour. In two, the peritoneal surface of the uterus was covered with lymph.—*Archives Générales de Medicine.*

Vapour of Iodine for the Cure of Consumption.—A letter from Dr. Berton was lately read before the Royal Society of Medicine, respecting the employment of the above named medicinal agent in cases of tubercular consumption. This mode of using iodine appears to the author to have a double advantage—first, in not producing gastric irritation; and being also immediately applied to the diseased part, he produces the vapour by the application of sulphuric acid to the hydriodate of potash. Air loaded with this vapour does not excite the least irritation in the throat. M. Berton cites three cases in which this method was productive of good effects: in two of them the cough and expectoration were diminished, and the appetite improved; in the third, although the plan had not been long adopted, the relief was evident. M. Berton thinks that a greater number of facts are still required to enable us to pronounce an opinion as to the real value of this medicine.—*Journ. Hebdomadaire.*

Absence of the Lower Portion of the Dura Mater.—A female infant was born prematurely in a state of great weakness; it was with difficulty she was made to take the breast; one eye was smaller than the other. A few minutes after birth she was seized with convulsions, which increased in frequency and violence, so that she experienced 100 in 24 hours; in other respects she was like other infants. As she grew up, neither the sensibility nor the loco-motive powers were developed properly; she could neither hear nor see; but her taste was perfect. She lived to complete her 17th year, but had never been able to lift her hand to her head; was completely dumb, excepting that when hungry she would utter a very feeble cry. It appears that some signs of menstruation and puberty had made their appearance.

On opening the body there was observed in the head a distention of the vessels of the brain, and a small quantity of serum in the lateral ventricles; the dura mater, which lines the base of the cranium, and accompanies the nerves to their exit, was entirely wanting, but the nerves, &c. were perfectly sound; a semi-transparent thin membrane, very loose and irregularly disposed, appeared to be a substitute for the dura mater, but without fulfilling its functions; behind, the tentorium was almost entirely wanting, so that the cerebellum was obliged to support the whole weight of the brain.—*Journal Hebdomadaire.*

Caries of the second Vertebra of the Neck. By Dr. Gubion.—A man aged 24 years, had been troubled for a considerable time with pain along the spinal column, which had also become crooked. These symptoms were attributed to masturbation. When admitted into the hospital St. André, at Bordeaux, a tumour of considerable size was observed in the back of the neck, presenting all the symptoms of a phlegmon. Leeches were applied with momentary relief, but at the moment when the patient was thought to be improving, he died suddenly. On dissection the whole body of the second vertebra of the neck was found destroyed by caries. The processus dentatus was suspended by the ligaments which united it to the occipital bone; it was still however, confined in the ring formed by the anterior part of the first vertebra and the transverse ligament. The left transverse process of the second vertebra was also destroyed by the caries. The spinal marrow presented no remarkable alteration of structure.—*Journal Universel, &c.*

Metastasis of Cancer.—We sometimes hear of very extraordinary occurrences. When these are brought forward as facts by those who have seen them, or who pretend to have seen them, we hardly know whether to give up our assent to the statements, or reject them altogether, if not as impossibilities, at any rate as very great improbabilities. The following case is one of this nature:—A lady, whose mother had died of cancer of the breast, and whose father, of an operation for sarcocele, presented for a long time general symptoms of scrofula, was affected with engorgement of the right breast, which exhibited all the symptoms of cancer. M. Dupuytren being consulted, with M. Parent du Châtelet, who attended the patient, pronounced the disease to be a cancer, and he considered it so far advanced that he was unwilling to attempt an operation. Some time afterwards the patient felt lancinating pains, like those of the breast, in the right side of the head, and M. Parent du Châtelet was not a little surprised to find the tumour of the breast disappear in proportion to the progress of the pain in the head. Hemiplegia supervened; the cephalalgia became excruciating, and the patient died in the greatest agony. On examination after death, the breast originally affected was found to have returned to a state perfectly natural: but in the lateral part of the right side of the brain was discovered a cancerous tumour, of the size of a common walnut.—*Jour. Hebdom. from the Lond. Med. and Surg. Journal.*

Facial Neuralgia cured by the Wine of Colchicum. By Dr. Campagnano.—Dr. ———, surgeon-major of the royal marine, aged 63 years, was attacked in June, 1826, with most violent pain in the right cheek, which, from its lancinating and fugacious character, was considered as neuralgic by all the physicians consulted on the occasion. V. S. leeches, purgatives frequently repeated, pediluvia, resolvents, anodynes of every description, blisters, lotions with the water of the cherry laurel, and a great variety of other means were employed successively, and without the slightest relief. Recourse was then had to acupuncturation, and even to the division of the sub-orbitary nerve, but without greater success. M. Campagnano, being informed, that the patient had several years previously been troubled with pains in the articulations of the fingers, conjectured that this affection of the nerve, might be dependent upon an arthritic cause. In this view of the case, he directed the vinum colchici, which he had frequently employed in the treatment of gout with much advantage. The event justified his opinion, for the patient had scarcely taken the second dose of thirty drops, when his bowels were actively operated upon, not more so however than by the purgatives which he had formerly taken. From that moment the pain, which immediately before had been so violent and obstinate, ceased altogether.—*Osservatore Medico di Napoli.*

Effects of Abstinence on the Stomach.—The *Medicinisch-Chirurg. Zeitung* contains the result of some interesting experiments relative to the action of the gastric juice on the parietes of the stomach after death, and to the effects of abstinence on animals of different kinds. The gastric and intestinal juices never soften or dissolve the membranes of the stomach or intestines; their action is rather diminished than augmented during abstinence; and the proximate cause of death by hunger is not inflammation of the stomach, as has been lately maintained, but general exhaustion. Carnivorous animals bear abstinence much longer than herbivorous ones, and dogs die much earlier than cats; if, during abstinence, carnivorous animals are supplied with water, they live considerably longer than those who are deprived of it; in herbivorous animals this is not the case, and they hardly ever touch the liquid even in extreme hunger; rabbits often die from exhaustion, although there are afterwards some remains of food found in the stomach, and if, driven by hunger, they devour animal food, they generally die very soon afterwards, although they have the power of digesting it, as appears from the contents of the stomach. In those animals who die from hunger, the veins of the abdominal viscera are generally found gorged with blood.

Treatment of Phthisis by Smoking Belladonna.—Professor Cruveilhier has lately used the belladonna in phthisis with great success, in the following manner: the fresh leaves were infused in a strong solution of opium, and then dried up like tobacco; the patients began by smoking two pipes a day, and the quantity was gradually increased to six pipes. In several cases of confirmed phthisis the cough became less frequent and violent, the pain and irritation of the larynx subsided, the dyspnœa disappeared, the expectoration diminished, and became less troublesome, the profuse nocturnal sweats, the heat and febrile excitement, became less, and the disease seemed to be completely arrested.—*Nouv. Bibl. Medic.*

Mode of Exhibition for Copaiba.—Any formula by which the peculiar unpleasantness belonging to a medicine can be removed, is truly deserving attention. With the following I was favoured by one of the gentlemen attending the Western Hospital. It is for the exhibition of that unpleasant medicine copaiba.

℞: Bals. Copaibæ f ʒij. Pulv. Acaciæ ʒij. Sacchari ʒiij. Liq. Potassæ f ʒiss. Spir. Myristicæ f ʒj. Aquæ f ʒvi, ft. Mist. Capiat cochlearia ij ter die.

I recommend this formulæ to the attention of practitioners, as being very eligible for the administration of this otherwise most nauseous medicine. The efficacy of the copaiba seems to be much increased by the combination.

One circumstance is to be attended to in its administration, namely, that, as it is apt to leave a caustic taste in the mouth, the patient should wash his mouth and fauces with some mild diluent.—*Lond. Med. and Surg. Journ.*

The last number of the London Medical and Surgical Journal contains the following communication from a correspondent, who styles himself "Chemicus."

Remedy for Gonorrhœa.—The following formula having been found in my own practice, as well as in that of some of my friends, very useful in checking gonorrhœa and its modification, gleet, after every other means, even *cubebs*, had failed, I do myself the pleasure of forwarding it, in the hope that it may be serviceable. The grand agent in the formula is the Tinc. Muriatis Ferri, which, for this purpose, as well as for every other, should be prepared from the *ferrum præcipitatum.*

℞. Tinct. Ferri. Muriatis ʒj. Sp. Ætheris. Nitrici ʒvij. Capt. Guttas XL ad LX bis vel ter in die in Aqua distillata.

Those who wish to use copaiba may gain the same beneficial consequences from the substitution of the same, in the place of the Sp. Ætheris. Nitrici, in the same proportion, and to be taken in the same way.

On Asphyxia from Submersion. By M. Orfila.—The latest experiments of M. Orfila on this subject, seem to prove that after death the liquid penetrates into the smallest ramifications of the bronchia. In a body, which

thirty-six hours after death had for six hours and a half been placed in a bathing-tub, filled with water, with which eight pounds of powdered animal charcoal had been mixed, the coloured fluid was found in the extreme bronchial ramifications, and on making an incision into any part of the lungs was observed, on the least pressure, to ooze out from their tissue. The stomach did not contain the least particle of the fluid. In two bodies, which two days after death were placed in the mixture for about forty minutes, it had entered the trachea as far as its division, and no trace of it could be found in the stomach. Two important conclusions appear to result from these experiments:

1. The presence of water in the bronchia and tissue of the lungs, is no sufficient proof of the body's having, during life, been immersed in water, as is asserted by several writers on forensic medicine.

2. The fluid does not penetrate after death into the stomach, and its presence in this organ affords considerable ground of suspicion of the body's having been during life immersed under water, provided there be no reason to believe that it was swallowed before, or injected after the immersion.—*Journal de Chim. Mêdic.*

Prolapsus and Rupture of the Uterus during Delivery. By Dr. Henschel, of Breslau.—A female, ætat. 30, of a very weak constitution, who had, since her last confinement, been affected with incomplete prolapsus uteri, became again pregnant; during the latter period of gestation, the uterus gradually reascended into the pelvis, and at last regained its natural position. The incipient stage of labour seemed perfectly natural; the contractions of the uterus were very powerful; the os uteri had dilated to about half an inch, and the head had entered into the small pelvis, when, on a sudden, during a pain, the lower portion of the uterus prolapsed. On examination, Dr. Henschel found a large fleshy mass protruding from the vagina; it was of cylindric form, six inches in length, and two and a half in diameter, very tense, and of a bluish red colour; the upper portion appeared somewhat thinner than the lower, in which the os uteri, the edges of which were much tumefied, was easily distinguished. The patient was very much exhausted, and complained of excruciating pain in the prolapsed mass. The head of the child having descended through the lower aperture of the pelvis, lay between the labia pudendi, and was forcibly pressed by the contractions of the uterus towards the cylinder, the upper portion of which being violently distended on each uterine contraction, threatened immediate rupture. The os uteri having meanwhile dilated to more than an inch, Dr. Henschel resolved upon terminating labour by the immediate application of the forceps; which having been readily introduced, the head was without much difficulty brought towards the aperture, when the upper portion of the cylinder all at once began to burst; the forceps were accordingly withdrawn, and the head made to descend as slowly as possible, to prevent further laceration, but without success; for when the head descended through the os uteri, the external surface of the cylinder, a little below the symphysis, presented a transverse rupture of about two inches in length, and of considerable depth, without, however, as it appeared, penetrating through the paries of the uterus. The child was born alive, but died within a few hours. After the removal of the placenta, the prolapsed portion of the uterus powerfully contracted; it became considerably shortened, but increased in thickness, so that when Dr. Henschel attempted to return it into the pelvis, its size occasioned great difficulty. This was, however, at last accomplished. On examining the internal surface of the vagina and lower portion of the uterus *in situ*, no trace of any wound could be discovered. During and after the laceration, the hemorrhage was slight, but the sufferings and exhaustion of the patient were very great. Emollient injections were thrown into the uterus, and small doses of opium given internally. The ensuing night was very restless; the patient lost much blood, and complained of violent pain over the whole abdomen, which was tense and very tender on pressure; the upper portion of the uterus had completely contracted, but the lower was still very tumid and painful. The opium and emollient injections were continued, and a poultice laid over the abdomen. On the second night, the tension and pain of the belly considerably increased; the patient was very feverish, and in a desponding state. After the application of an emollient glyster, and some leeches to the hypogastric region, the inflammatory symptoms gradually subsided; the breasts filled with milk, and the lower portion of the uterus began to contract; so that on the seventh day it had nearly regained its natural size. The lochial flux was very profuse, and contained much purulent matter. Four weeks after delivery, the patient was perfectly cured. On examination of the vagina and uterus, no trace of any previous laceration could be discovered; the uterus was of the natural size, and in the lower portion only, there was a slight degree of tenderness. —*Siebold. Journ. für Geburtsh.*

Case in which a Needle was introduced into the Larynx.—A man had been using a needle for the purpose of scratching his nostril: having let it go, it passed backwards into the fauces, and fell into the windpipe. The needle had a thread attached to it, which was entirely drawn in, and disappeared. Violent fits of coughing and attempts at expectoration immediately came on: by these the end of the thread was ejected, and the patient laid hold of this and pulled it. These attempts gave him great pain, but were unavailing. He continued for three days in a state of great anxiety and suffering, during which he made numerous ineffectual attempts to pull out the

needle. At length he came to the Beaujon, at Paris.

The thread was still hanging out of the mouth, and some efforts were again made by the house surgeon to extract the needle by pulling it gently, but in vain. M. Blandin, when he arrived, found that the thread had disappeared during the act of deglutition, nor could he recover it by introducing the fingers into the pharynx, nor by any other means. Uncertain whether the needle had really got into the larynx or the gullet, he contented himself with applying thirty leeches to the throat, followed by a poultice, &c. Next day the patient was much in the same state, and was bled to sixteen ounces, and had twenty leeches to the neck, &c.

For two days more there was little to remark; when, during the visit, the patient expelled the end of the thread in a fit of coughing. M. Blandin, having satisfied himself that the needle could not be pulled out, fixed the thread upon the cheek with a little adhesive strap, and resolved to operate next day.

On the following morning the respiration was more difficult, and the voice more hoarse. M. Blandin, having again tried various means of extracting the needle, proceeded to operate. The patient was placed horizontally on a bed facing the light, and M. Blandin, standing on the right side of the patient, fixed the larynx with the left hand, and then endeavoured to find the crico-thyroidean space, but the swelling rendered this impossible; he therefore made an incision through the skin on the median line, about a third of the length of the throat, and afterwards divided the subjacent parts very cautiously: it was not till he had penetrated to the depth of an inch that he laid bare the crico-thyroid membrane. Some bleeding took place, but the hemorrhage soon ceased. The nail of the forefinger of the left hand was placed transversely on the membrane, which was then punctured, and cut in the same direction. A grooved and curved director was introduced by the wound, and carried upwards, and the thyroid cartilage divided upon it throughout its whole length. Respiration was now freely performed through this large opening, but the voice was lost. A polypus forceps was introduced at two different times and speedily withdrawn, on account of the irritation it excited, but without the needle. Considering it possible that the needle might be expelled in a fit of coughing, the patient was put to bed, the wound being lightly covered with a piece of linen pierced with holes, and spread with cerate.

On the following day a needle, nineteen lines in length, blackened, and as it were bronzed, was found attached to the compress laid over the wound.

The wound healed very slowly. The operation was performed on the 22d of June, and a fistulous opening, with great weakness and hoarseness of voice, remained in September. On the 30th of that month, it is stated that, by means of caustic applied to the edges of the aperture, it had at length closed, and the voice regained some of its former strength.—*Journal Hebdomadaire.*

On Blistering Infants.—The melancholy consequences which frequently arise from the application of blisters to young children, renders every suggestion which is probable may prevent them of great importance. We find that an hour or an hour and a half is a sufficient time for a blister to remain upon a child, and although at the expiration of that time no vesication is apparent, yet, if the part be covered with any mild dressing or a poultice, a sufficient degree of irritation will be observed in a few hours' time, in fact quite sufficient for the peculiarly delicate and susceptible constitution of children. When the emplast. cantharides has been employed in this manner, we have never witnessed any alarming result.—*Lond. Med. and Surg. Jour.*

New Publications.

A Synopsis of Modern Medical Jurisprudence. By J. S. Forsyth, Surgeon, &c.

Napoleon à St. Hélène. Opinion d'un Medecin sur la Maladie de l'Empereur Napoleon, et sur la Cause de sa Mort. Par J. Hereau.—Paris, 1829. 8vo. pp. 228.

On Aneurism, and its Cure by a New Operation. By James Wardrop, Surgeon to his Majesty Royal. 8vo. pp. 177, and seven plates, with explanation.

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